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# MEDICAL

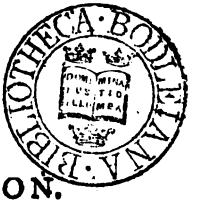
# OBSERVATIONS

## AND

# INQUIRIES.

BY

A SOCIETY OF PHYSICIANS IN LONDON.

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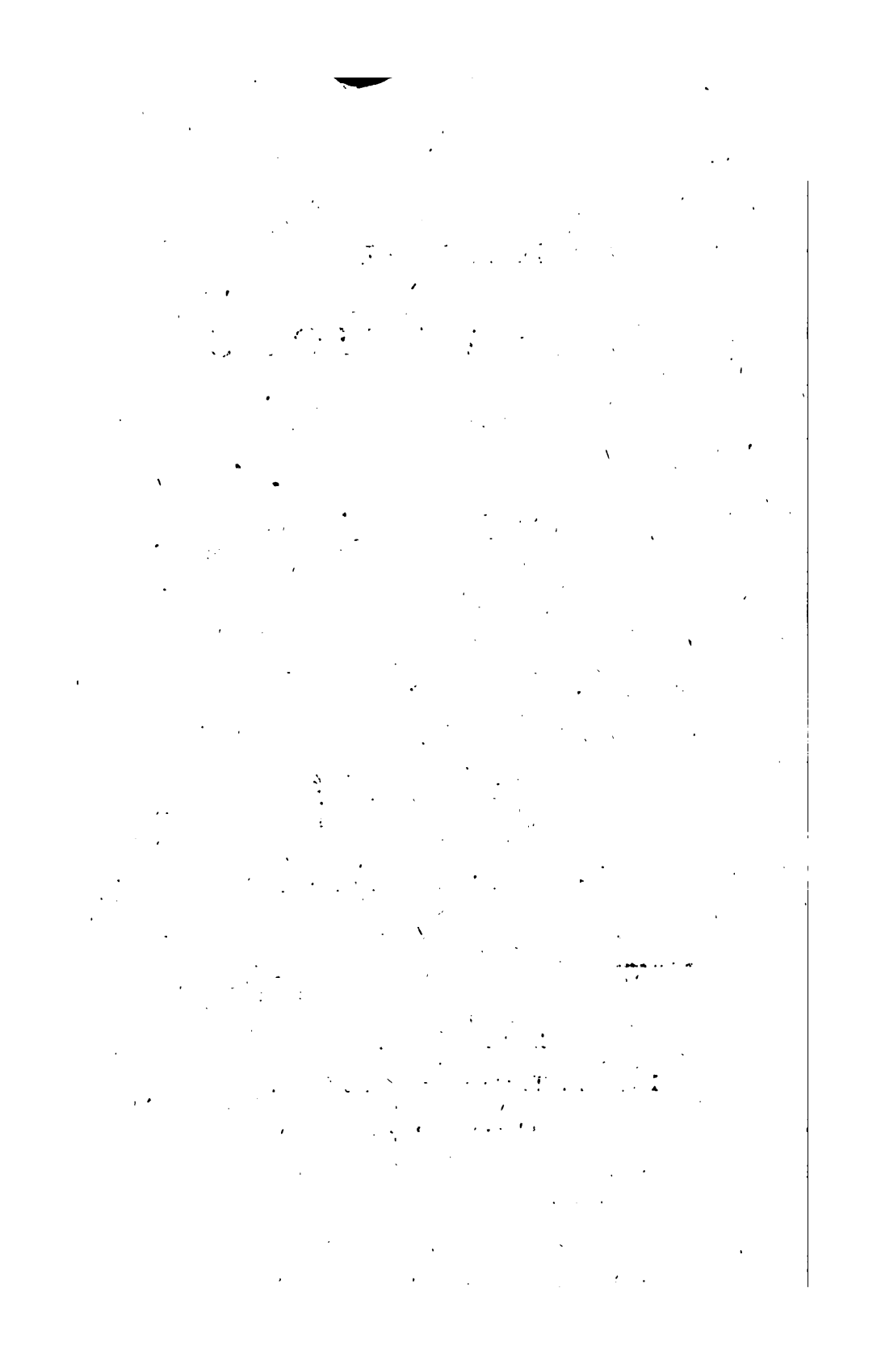


# PREFACE.

THE Society preſents to the Public another volume of MEDICAL OBSERVATIONS and INQUIRIES; and, at the ſame time, acknowledges, with gratitude, its obligations to thoſe who have ſo generouſly contributed to this collection.

THE favourable reception which the former volumes have met with, aſſures the Society, that the preſent will be treated with equal candour.

A STRICT impartiality, in ſelecting the papers for publication, is

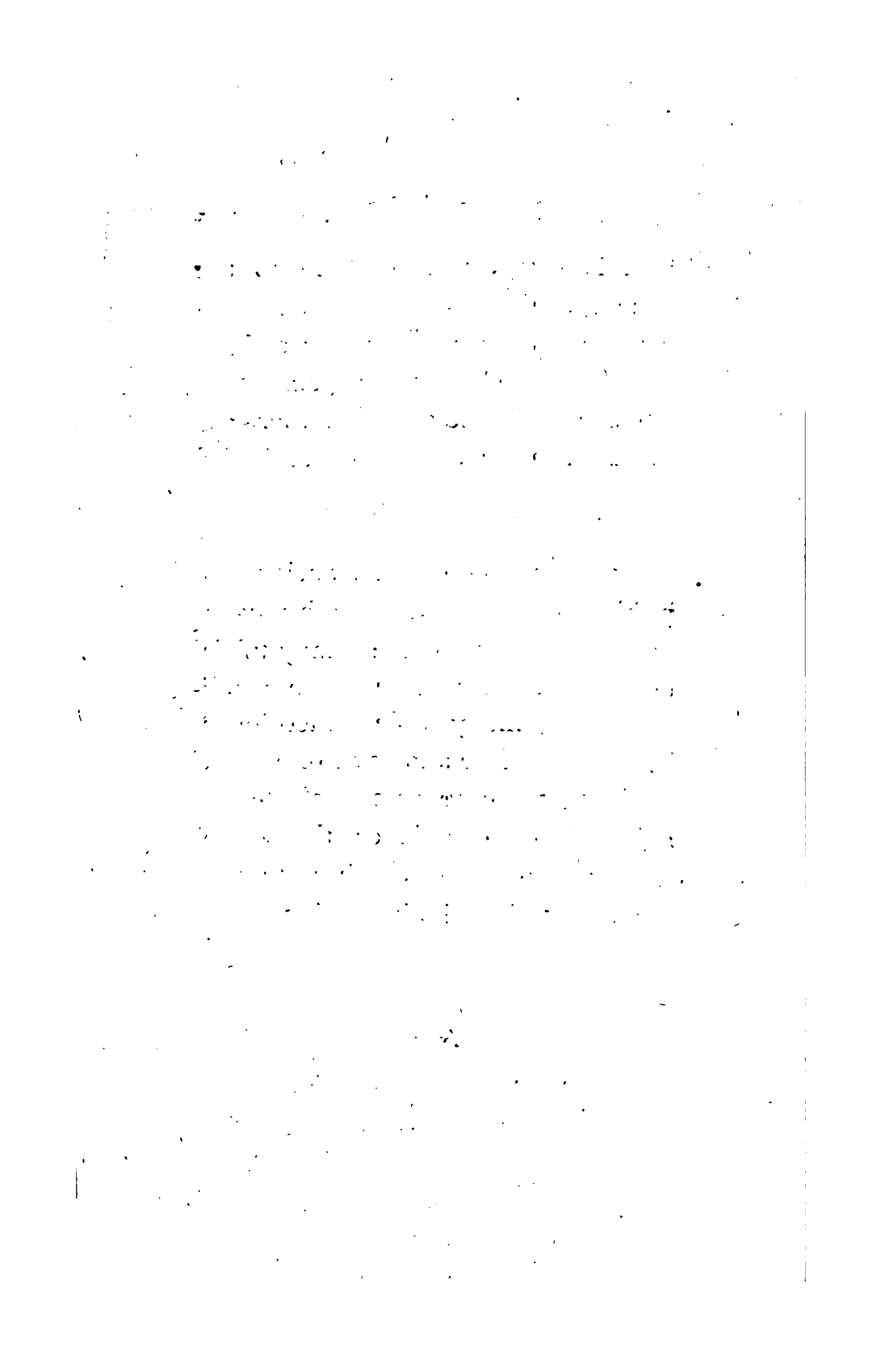
maintained. Some ingenious eſſays are at preſent with-held from the Public, to give the reſpective authors time to make them more complete. This is only mentioned to prevent thoſe, who may not ſee their papers in this volume, from withdrawing their correſpondence.

An apology is neceſſary for one article in this collection, as it has already appeared in another work. Before this was known, that article had been printed off. The Society therefore hopes, that thoſe gentlemen who intend to publiſh their works apart, will, for the future, render ſuch apologies unneceſſary.

In the preface to the laſt volume, it was ſaid, that a Paper from Dr. Wade of Liſbon, "On the uſe of the *cicuta* "in

" in Portugal, was deferred to the " next volume, in order to have it " more complete by his future obſer- " vations." Theſe obſervations have not been yet received, and therefore the publication of that paper is ſuſpended.

THE intention of this Society, in publiſhing obſervations, hath thus far been happily anſwered; many uſeful eſſays have been reſcued from oblivion, and many able practitioners incited to obſerve and enquire. Whilſt theſe continue to communicate the reſult of their experience, the Society will, with pleaſure, continue to promote the ends of its inſtitution.



THE

# CONTENTS.

Art.

I. CASE *of a diſeaſed Leg, by Mr.* Balfour, *Surgeon at* Edinburgh, *in a Letter to Dr.* Hope, *F. R. S. And tranſmitted by him to* William Watſon, *M. D. F. R. S. Read* April 18, 1768. Page 1

II. *Experiments relative to the Analyſis and Virtues of* Seltzer Water, *by* Richard Brocklesby, *M. D. Fellow of the Royal Society, and of the College of Phyſicians of* London, *Read* July 5, 1768. 7

III. *Remarks on the* Hydrocephalus internus, *by* John Fothergill, *M. D. F. R. S. Read* Auguſt 8, 1768. 40

IV. *An Account of a Rupture of the Bladder from a ſuppreſſion of urine in a pregnant Woman, by Mr.* Hay, *Surgeon at* Leeds. *Commu-*

Art.

*Communicated by* W. Hunter, *M. D. F. R. S. Read* Auguſt 8, 1768. Page 58

V. *Of the Cure of the* Sciatica, *by* John Fothergill, *M. D. F. R. S. Read* 22 Auguſt, 1768. 69

VI. *Obſervations on the* Hydrocephalus internus, *by* W. Watſon, *M. D. F. R. S. Read* 22 Auguſt, 1768. 78

VII. *A Caſe of the* Locked Jaw, *and* Opiſthotonos; *to which are added ſome Remarks on the Uſe of the* Cicuta, *by* William Farr, *M. D. Phyſician to the Royal Hoſpital at* Plymouth. *Communicated by* William Watſon, *M. D. F. R. S. Read* 17 October, 1768. 91

VIII. *An* Hemiplegia, *attended with uncommon circumſtances, communicated by a Member of the Society. Anonymous. Read* October 31, 1768. 110

IX. *Of the Uſe of Tapping early in Dropſies, by* John Fothergill, *M. D. F. R. S. Read* 14 November, 1768. 114

X. *On painful Conſtipation from indurated* Fœces. *Anonymous. Read* 14 November, 1768. 123

XI. *An*

Art.

XI. *An Account of the Putrid Meaſles, as they were obſerved at* London *in the years* 1763 *and* 1768, *by* William Watſon, *M. D. F. R. S. Read* 9 January, 1769. Page 132

XII. *Obſervations on the Bilious Fever uſual in Voyages to the* Eaſt Indies, *by* James Badenoch, *M. D. Communicated by Dr.* Watſon. *Read* 20 February, 1769. 156

XIII. *An Account of a new Method of amputating the Leg a little above the Ancle Joint, with a Deſcription of a Machine particularly adapted to the Stump, by Mr.* Charles White, *Surgeon to the* Mancheſter *Infirmary. Communicated by Dr.* Hunter. *Read* February 20, 1769. 168

XIV. *A* Bubonocele, *attended with uncommon Circumſtances; with Remarks on the Uſe of Carrot Poultice. By Mr.* Henry Gibſon, *Surgeon at* Newcaſtle *upon* Tyne. *Communicated by Dr.* Hunter. *Read* October 31, 1768. 178

*An obſtinate Caſe, where the Carrot Poultice as a Topic, and the Malt Infuſion as a Medicine, proved very efficacious.* 191

XV. *Ex-*

Art.

XXV. *Appendix to a Paper on the* Hydrocephalus Internus, *by* William Watſon, *M. D. F. R. S. Read* 30 April, 1770. Page 321

XXVI. *An Extract of a Letter from Dr.* William Thomſon, *Phyſician at* Worceſter, *to* William Hunter, *M. D. F. R. S. giving an Account of a fatal Effuſion of Blood into the Cavity of the* Pericardium. *Communicated by Dr.* Hunter. *Read* June 25, 1770. 330

XXVII. *An Account of the good Effects of dividing the* Aponeuroſis *of the* Biceps Muſcle, *in a painful lacerated Wound, by Mr.* B. Wilmer, *Surgeon at* Stony Stratford, *in a Letter to Dr.* Hunter. *Read* October 1, 1770. 338

XXVIII. *An Obſervation on the Inſenſibility of Tendons, by Mr.* John Teckel, *Surgeon; with an Introduction by Dr.* Hunter, *and by him communicated to the Society. Read* October 1, 1770. 343

XXIX. *An Account of a ſucceſsful Method of treating ſore Legs, by Mr.* Joſeph Elſe, *Surgeon to* St. Thomas's *Hoſpital. Communicated*

Art.
XIX. *A Defence of* Sydenham's *Method of treating the Meaſles. By* Thomas Dickſon, *M. D. F. R. S.* Page 247
XX. *A Defence of* Sydenham's *Hiſtory of the Meaſles, againſt* Morton, *by* Thomas Dickſon, *M. D. F. R. S.* 256
XXI. *A Caſe of the* Cæſarean Section; *by* William Cooper, *M. D. Communicated by Dr.* Hunter. *Read* 1769. 261
XXII. *An Account of the* Cæſarean Operation, *with Remarks, by Mr.* Henry Thomſon, *Surgeon to the* London *Hoſpital. Communicated by Dr.* Hunter. 272
XXIII. *Remarks on the Cure of Conſumptions, by* J. Fothergill, *M. D. F. R. S. Read* June 11, 1770. 289
XXIV. *An Account of a late epidemical Diſtemper; extracted from a Letter addreſſed to* Gedney Clarke, *Eſq; by* William Sandiford, *M. D. of* Barbadoes. *Communicated by Dr.* Fothergill. *Read* April 16, 1770. 305

XXV. *Ap-*

Art.

*Communicated by* R. Brockleſby, *M. D. F. R. S. and Fellow of the College of Phyſicians*, London. Page 371

XXXIV. *Two Letters on the* Varicoſe Aneuryſm, *from Mr.* W. White, *Surgeon at* York, *to* William Hunter, *M. D. F. R. S. and by him communicated to the Society.* 377

XXXV. *A Letter from Mr.* Thomas Armiger *Surgeon, to* William Hunter, *M. D. F. R. S. on the* Varicoſe Aneuryſm. *Communicated by Dr.* Hunter. 382

*A Poſtſcript to the preceding Caſe of the* Varicoſe Aneuryſm, *by* William Hunter, *M. D. F. R. S. addreſſed to the* MEDICAL SOCIETY. 385

XXXVI. *The Hiſtory of a fatal Inverſion of the* Uterus, *and Rupture of the Bladder, in Pregnancy, by Mr.* John Lynn, *Surgeon at* Woodbridge *in* Suffolk. *Communicated by* William Hunter, *M. D. F. R. S.* 388

*An Appendix to the preceding Article, by* William Hunter, *M. D. F. R. S. addreſſed to the* MEDICAL SOCIETY. 400

XXXVII. *An-*

Art.
XXXVII. *An Account of a ſimple Fracture of the* Tibia *in a pregnant Woman, in which Caſe the* Callus *was not formed till after Delivery: By Mr.* Edward Alanſon, *Surgeon at* Liverpool. *Communicated by* William Hunter, *M.D. F.R.S. Read* 4th September, 1769. Page 410

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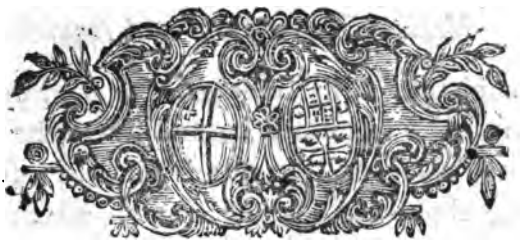

# MEDICAL OBSERVATIONS AND INQUIRIES.

1. *Caſe of a diſeaſed Leg, by Mr.* Balfour, *Surgeon at* Edinburgh. *In a Letter to Dr.* Hope, *F. R. S. And tranſmitted by him to* William Watſon, *M. D. F. R. S. Read* April 18, 1768.

A GIRL, aged ſix years, lively and healthy, but of a ſlender make, received at ſchool a ſlight hurt on the outſide of the left leg, three or four inches below the knee, in the month of March 1767. This injury was ſo ſlight, that ſhe took little notice of it at the time; but ſome days afterwards

complained to her mother of a pain in the part, who examined it, and found the ſkin not diſcoloured, but was ſenſible of a ſwelling about the ſize of a nut, which ſhe hoped, by rubbing and warmth, to diſcuſs. As it continued to increaſe, and at times gave conſiderable uneaſineſs to the child, the mother, by the advice of her neighbours, applied ſoftening poultices; but without any good effect. About the beginning of May, Dr. James Hay, a fellow of this college, and Mr. Balfour, ſurgeon, were called to viſit the child; and found the tumor hard, circumſcribed, and of the ſize of an egg, and the colour of the ſkin ſtill unaltered. She complained at times of pain, but allowed the tumor to be touched with freedom. From the fixed hardneſs of the tumor, we ſuſpected the ſeat of the diſeaſe to be in the bone. The Doctor ordered a courſe of æthiops powders, a laxative infuſion of ſenna once a week or fortnight, an infuſion of ſaſſafras for her common drink, a mild diet; that ſhe ſhould be kept from much walking, and have her leg placed moſtly in a horizontal poſture.

Expecting

Expecting little advantage from external applications, we allowed the mother to continue the uſe of the emollient poultices. The tumor, during the months of May and June, increaſed ſlowly, ſpreading in a circular form round the leg, but was moſt prominent on the ridge of the *tibia*. During the month of July, her pains became more conſtant and violent, and her pulſe more frequent, which at the beginning was little affected. The patient became thin, pale, and languid; the tumor made a quicker progreſs; the colour of the ſkin began to alter, and the veins on its ſurface were enlarged. At this period of the diſeaſe, emollient fomentations were employed, as they gave a temporary relief; and a poultice of bread and milk, with ſweet oil, was applied to the part twice a day, with a view of promoting the ſuppuration. The bigneſs of a nutmeg of a digeſtive, compoſed of gum *galbanum* diſſolved with the yolk of an egg, to which was added ſome yellow *baſilicon*, was mixed with the former poultice. The tumor, which was now as large as a child's head, appeared to the

touch, in ſome places, ſoft and pappy, in others, hard and bony. About the beginning of Auguſt, by the advice of Dr. Hay and Mr. James Ruſſel, ſurgeon and profeſſor of natural philoſophy, I made an inciſion an inch in length, with an impoſthume lancet, into the ſoft and moſt depending part of the tumor; but nothing iſſued except a bloody ichor, and the little wound ſoon put on a livid appearance. It was dreſſed with warm digeſtive, the poultices were continued, and the bark in ſubſtance was given. The tumor was not diminiſhed by the diſcharge; and being now moſt prominent and ſoft on the forepart of the *tibia*, we reſolved to try the effect of an inciſion made in this part likewiſe. I accordingly paſſed a lancet above an inch deep almoſt without reſiſtance, and from the puncture a bloody ichor was diſcharged. Convinced, by all theſe circumſtances, of the diſeaſed ſtate of the bone, we ſaw no other remedy left to ſave the patient, but the amputation of the limb, and thought it better to try a doubtful remedy than none. In this ſituation we propoſed conſulting with Mr. Robert

bert Smith, an experienced ſurgeon in this city, who joined us in opinion, that the amputation of the limb was the only thing left to be done. The parents, though informed of the uncertainty of ſucceſs, gave their conſent.

As the upper part of the tumor reached within two inches of the knee, we apprehended that the bones might be affected as high as the joint; and, therefore, reſolved to amputate above it.

The child underwent the operation at noon, and loſt only a ſmall quantity of blood: as ſoon as ſhe was put to bed ſhe fell a vomiting, and had a few drops of *laudanum* given her; notwithſtanding which the vomiting continued. About four o'clock I viſited her again, and found that the vomiting had ceaſed. She was eaſy and diſpoſed to ſleep, her pulſe frequent but firm. On viewing the dreſſings, I perceived they were moiſtened with a thin ſerous diſcharge, hardly tinged red; but which ſeemed in much greater quantity than uſual. Betwixt five and ſix o'clock ſhe was diſpoſed to take ſome food; and raiſing herſelf up to dip a

piece of bread in a diſh of tea, fainted away, and died.

On examining the diſeaſed limb, we found no appearance of bones, but a few bony *lamellæ* interſperſed through the ſubſtance of the tumor, which exhibited the appearance of a ſpunge, with its cells diſtended with coagulated blood. On diſſecting the limb up towards the knee, we found the ſubſtance of *tibia* and *fibula* diſſolved to within half an inch of the articulation. On diſſecting downwards, the ſame appearance continued to within an inch or two of the ankle; and the whole appeared one confuſed maſs of coagulated blood and mucus, without diſtinction of bones, membranes, or muſcles.

The circumference of the tumor meaſured twenty-four inches.

II. *Experiments relative to the Analyſis and Virtues of* Seltzer Water. *By* Richard Brocklesby, *M. D. Fellow of the Royal Society, and of the College of Phyſicians of* London. *Read* July 5. 1768.

MY view, by the following obſervations, is to recommend to practitioners in phyſick a more extenſive trial of Seltzer water than is at preſent in common uſe; for though *Hoffman*, and other *German* writers, have been abundantly laviſh in praiſe of this remedy, and though ſeveral phyſicians of London have long thought favourably of its good effects; yet its uſe appears, in my opinion, ſtill too confined, conſidering the real efficacy which I have thereby often experienced in the cure of ſeveral acute, as well as chronical diſeaſes. However, before I proceed to the medical part of my ſubject, I have deemed it not altogether unneceſſary to premiſe a ſketch of the natural hiſtory, and a chemical ana-

lyſis of its contents, as contributive, though not fully to aſcertain all its medicinal virtues, yet, at leaſt, to ſtrike out ſuch lights, as may enable the judicious reader to approach ſome way on towards probability, beyond which, our imperfect knowledge of nature, in general, is ſeldom able to advance in any ſubject.

Seltzer water, imported at London, is brought from the electorate of Triers *, in ſtone-bottles, cloſe corked and cemented, containing about three Engliſh pints each, by which means this water, as long as it is confined from all acceſs of the common air, will

* Mr. Owen in Fleetſtreet gave me the following relation taken on the ſpot, when he went to Germany to ſettle his correſpondence for importing mineral waters. "This "village is called Nieder Seltzer, or Lower Seltzer; the "country where it is ſituated lying low, but very delight-"ful and woody. Seltzer is about ten miles from Franc-"fort on the Mayne, and thirty-ſix from Coblentz. The "ſpring is covered over with boards like a floor, except "two places, at one of which they rinſe the bottles, and "at the other, whence the water iſſues with great rapidity, "they fill, cork, and cement them; then they are packed "in caſes, and ſent down the Rhine. This water is drank "at meals in many parts of Germany and Holland, and is "in great eſteem in thoſe parts, both as a conſtant agree-"able drink at table, and as a valuable medicine."

retain

retain moſt of its excellent qualities ſeveral months; but ſuch a caution is ſo neceſſary, that, if too large an empty ſpace is only left in the neck of a bottle, its water ſhortly loſes the greateſt part of that briſk, ſmart, pungent taſte, which, in a good degree, characteriſes its excellence; and for want of ſuch precaution, more of it becomes ſpoiled by keeping a ſhort time, than any other mineral water that I am acquainted with.

In the firſt place, I compared the effects of certain active ingredients thrown into Seltzer water, with the appearances which ſucceeded on adding the like ſubſtances to pure diſtilled water in equal portions. I dropped twelve drops of the higheſt coloured ſyrup of violets I could get, into a wine-glaſs of Seltzer water, and as much into pure diſtilled water; the ſyrup with Seltzer water at firſt, and till intimately mixed, ſeemed to take a purple hue; but, on their intimate union, the whole changed to a beautiful light green: whilſt the like quantity of ſyrup mixed with diſtilled water only, ſuffered no obſervable alteration of colour; but when I added to this pure water, one grain of ſalt of tartar, it inſtantly,

inſtantly, on diſſolution, became of a dark green colour, widely different from the other produced in the Seltzer water.

Whilſt no change of colour followed in pure diſtilled water, by dropping into it any vegetable *alkali* in a liquid form, the ſame quantity of oil of tartar *per deliquium*, dropped into a glaſs of ſparkling, freſh, clear Seltzer water, quickly turned the whole milky, and after duly ſtanding, a fine pearl-coloured powder fell to the ſides and bottom of the glaſs. This appearance ſeems to proceed from the more prevalent elective attraction of an acid, letting go a calcarious earth, and uniting itſelf preferably to a fixed *alkali*.

I next put an equal number of drops of pure dephlegmated ſpirit of vitriol into two glaſſes; one of which was filled with pure diſtilled water, and the other with Seltzer water. No alteration enſued in the firſt when ſtirred about: but, in the Seltzer water, a light cloud was ſoon ſuſpended towards the middle of the glaſs, and numerous air-bubbles aroſe from all parts of the water; and, for a while, when the ſparkling

ſparkling had ceaſed, it might be renewed, by adding one or more drops of the acid, and ſhaking the glaſs till the cloud diſappeared; and the like ebullition was more readily produced by a ſolution of ſugar and Rheniſh wine, or vinegar, with the ſame; and indeed, ſimilar appearances followed on the mixture of all other, whether vegetable or mineral acids, dropped into Seltzer water, as when *alkalis* and acids are mixed together.

Volatile ſpirits of hartſhorn diſtilled *per ſe*, produced no other effect when mixed with Seltzer water, than it did with diſtilled water; yet a volatile cauſtic *alkali*, in half an hour after it had been dropped into Seltzer water, produced a cloud at firſt, and afterwards a precipitation enſued on the ſides and at the bottom of the glaſs.

*Lixivium ſaponarium* wrought no change on pure water; but inſtantly ſo far decompoſed a glaſs of Seltzer water, that a cloud appeared in the midſt, and the air-bubbles emerging from the under-part of it, were ſtopped ſo much by the cloud, that very few ſeemed to eſcape to the ſurface, but rather

rather all to be abſorbed by the ſmall portion of cauſtic *alkali* in the glaſs: for this greedily imbibes fixed air, wherever it comes into contact with it.

It may not be unworthy our remark, that good Seltzer water, freſh, poured into a glaſs, ſeparates immediately more air-bubbles, than any other water whatever that I have tried, and continues longer to do ſo in the open air; and though it thereby loſes much of its briſkneſs, yet its ſparkling may partly be renewed, by adding any ſubacid vegetable, and a little ſugar; ſuch as ſharp cyder, or Rheniſh wine and ſugar: but the beſt Seltzer water here will not perfectly curdle milk, nor yet lather with ſoap, any more than ſome of the other hard aceſcent waters: And with powder of gall nuts, no farther change of colour appeared in Seltzer, than did in pure water with the ſame.

I next proceeded to examine the ſalt of Seltzer water produced by evaporating twenty-four ounces of the beſt ſort, from which I obtained no more than thirty-ſix grains of a *ſaline reſiduum*: on other experiments

riments I got not ſo much in proportion; for I find the ſtrength of this water varies at different times, and none, that I ever eſſayed, produced near what Dr. Rutty obtained in his experiments; for, inſtead of thirty-ſix grains, according to the Doctor, from a pint, wine meaſure, the moſt I ever could get was ſhort of thirty grains, from the ſame quantity.

Having uſed part of a bottle of good Seltzer water, I left the reſt expoſed to the open air, till it became vapid and almoſt taſteleſs, and then evaporated the ſame; but the *ſaline* reſidue was diminiſhed by this management. This obſervation ſuggeſted an experiment, to draw off, by a cold ſtill, three pints and a half of ſome of this water, which was quite ſpoiled by keeping, till it became putrid: the firſt of it that came into the recipient ſeemed to give ſyrup of violets a greeniſh hue, whilſt the greateſt part of the remainder appeared to be no other than inſipid pure water; but the remaining *fæces*, at the bottom of the ſtill, being elutriated with boiling diſtilled water, the ſame filtrated and evaporated, produced

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no more than thirty-five grains of ſalt, whilſt the quantity of ſeparated earth that remained on the whited-brown paper uſed for filtrating, amounted to near a drachm.

But in another experiment with freſh Seltzer water, I could not obtain more earth than three grains from a pound; conſequently, the pure ſalt obtained from the beſt water which I tried, amounted only to the rate of twenty-ſix grains from a pint, wine meaſure, by the experiment now mentioned; but the earth of the putrid Seltzer water was more than the earth of the pure water, as 60 : 10 :: 6 : 1. Hence then, is it not probable, that, whatever is the alteration of the component ingredients in this water, which cauſes it to putrify, at the ſame time it extricates the active *ſaline* particles from the earth, which, ſo deprived of its acid, is left in much larger proportion in the putrid water, than is to be obtained from the freſh, by a like evaporation?

Ten drops of ſtrong ſpirits of vitriol, poured on as many grains of ſalt of Seltzer water, cauſed great and inſtant ebullition, and ſuffocating ſteams, which tinged blackiſh

blackiſh a ſilver ſpoon held in them, and the poliſhed ſurface, ſo attacked by the emitted fumes, was of bitter taſte, as it always is, when the nitrous acid diſſolves the ſmalleſt portion of ſilver; but no change of colour on a ſpoon enſued on dipping ſuch another into oil of vitriol or ſpirit of ſea-ſalt.

I next diſſolved ſixty-ſix grains of pure white ſalt, obtained from Seltzer water, in a ſufficient quantity of diſtilled water, then filtrated it, and thereby obtained ſeven grains of a calcarious earth, perfectly ſoluble in all weak acids. The clear filtrated ſolution was afterwards evaporated till a cruſt gathered on the ſurface, when about one third only was left; part of this cruſt, and other earthy particles ſoon ſubſided, on ſtanding to cool in a china bowl. But, having divided this liquor into two equal parts, I poured reſpectively as much oil of vitriol, and ſpirit of ſea-ſalt, as diſſolved the earth precipitated in each, and ſaturated the abſorbent or *alkali* contained in each water; and thus becoming pellucid again, they were evaporated *in balneo*, in order to examine each ſort of neutral ſalt generated. The ſolution

containing the oil of vitriol kept long in the ſame heat with the other, would not let go the whole of its watery particles, but reſembled to the very laſt, that *ſaline* liquid, called *Bittern*, which, when ſurcharged with calcarious particles, will ſcarce ſhoot at all into regular chryſtals: And the other water, being ſoon evaporated, exhibited *ſpicula* of ſea-ſalt; which, thrown on burning charcoal, decrepitated without any nitrous detonation.

I heated ten grains of ſalt of Seltzer water on red-hot charcoal, and blew the lighted coal long before it made the ſalt red-hot; but when ignited, it kept ſo without any detonation, though there was ſome decrepitation, yet it was ſo little, that a very ſmall quantity of the weight of the ſalt was found to be loſt on trial, afterwards. Then, in order to try whether the *reſiduum* might contain any *ferruginous principle*, I rubbed down into powder that ſalt which had been kept long ignited on burning charcoal, and applied a ſtrong magnet to the ſaid powder; but no particles were taken up by it: And I alſo tried the earth obtained in ſuch large quantities, as formerly mentioned, from the putrid water, by mixing a proper

quantity of crude *ſal ammoniac* with it, and ſublimed the ſame in a cloſe veſſel; but no *martial* flowers aſcended in the ſublimation, though chemiſts well know this proceſs is a more certain teſt of the exiſtence of the principle of iron, than any other whatever, even the loadſtone itſelf; for the *ſcoriæ* of iron, are not attracted by the magnet, but the ſame will ſublime into yellow-coloured *martial* flowers, by the aid of *ſal ammoniac* urged in a ſufficient heat to cauſe a ſublimation.

The light earth obtained by filtration or precipitation from Seltzer water, was intirely ſoluble in vinegar; which is a probability of ſome vitriolic, or other acid having been formerly united to it; when in its ſelenitic ſtate, it was perfectly ſuſpended in the limpid freſh mineral water.

Having thus far analiſed Seltzer water, ſo as to obtain its ſalts and earth, and the ſame being apparently too inconſiderable in quantity and quality to promiſe very material medicinal effects on their account only, I next applied myſelf to inveſtigate what might be aſcribed to the

great quantities of fixed air, which we formerly remarked this water diſcharges conſtantly, in a heat not exceeding that of the human body. And, in order to eſtimate the quantity of the ſame, I covered the mouth of a common *frontiniac* wine-bottle, filled with freſh Seltzer water, with a large piece of thin hog's-bladder, firſt moiſtened properly, and oiled in the inſide, ſo as, by twiſting it cloſe, to exclude as much as poſſible all the common air: and thus the greateſt part, if not quite all of it, was diſcharged from the cavity of the bladder, which, as before mentioned, was tied cloſe over the neck of the bottle, containing exactly 14 oz. 7 dr. of water for the experiment. In this condition, the bottle, with its contents, was put in *balneum mariæ*, cautiouſly attending, by a mercurial gage fixed on the outſide, that the heat of the water in the bottle ſhould never exceed 116 degrees by Farenheit's ſcale. When this was ſo done, I remarked, that, from firſt to laſt, for three hours in this heat, and till the mercury gradually fell to about 80°, the water in the bottle emitted,

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at intervals, air-bubbles copiouſly, which, collecting together, filled a large ſpace in the bladder; but when it cooled, ſo that the mercury in the thermometer fell under 80°, the bladder, which was tight juſt before with factitious air, grew flaccid, and the fixed air was manifeſtly re-abſorbed into the water.

This put me on varying the experiment with freſh Seltzer water; when the bladder was moſt diſtended with fixed air, I inſtantly inverted the bottle, and found that the water, which, on firſt tying the bladder, made no way into it, now, by ſo much air, being ſet looſe from the contents within, flowed readily into the ſame; and the generated air mounted in the bottle, ſo as to give me an opportunity of marking the ſpace replete with the ſame, and of knowing how much water it would receive afterwards: and thus I found it amount to a little more than 2 oz. 2½ dr. Now admitting, according to the ingenious Dr. Brownrigge, in the Philoſophical Tranſactions, (*Vide* vol. lxv. p. 230.) that, as 265 grains of common water is nearly equal to

a cubic inch, the ſame weight of Seltzer water may be, in like manner, eſtimated; dividing the whole weight of water, or 7140 grains, by 265, the quotient is barely 27 cubic inches; but, by experiment, the factitious air of the bottle, at its greateſt ſtate of admeaſurement, occupied a ſpace that held 2 oz. $2\frac{1}{2}$ dr. of water, which, reduced as above into cubic inches, amounts nearly to $4\frac{1}{5}$th; and ſo large a quantity of interſtitial air was generated in a heat not incompatible with life in any part of the world, as the fever-heats in all climates teſtify, and ſhort of that heat which is often experienced, without inſtantaneous prejudice, in ſome tropical climates.

But, as I ſoon found that the generated air was not all permanent, but that part of it began ſoon to be re-abſorbed into the body of the water, I left the veſſel expoſed to the open air, with its bladder diſtended, till, in about eight hours, it had collapſed ſo much, that, on inverting the frontiniac bottle, the ſpace occupied by the remaining air did not exceed one fifth of what it formerly had done.

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The ſame quantity of New-river water, treated exactly in a like proceſs, yielded, in the greateſt heat, not exceeding 116°, much fewer air-bubbles than the former; nor did the quantity of generated air, at any point of time in this experiment, ſeem to exceed that permanent in the foregoing; and the greateſt part, if not all, diſcharged from common water, continued three days without any manifeſt introſuſception again. Hence then we find an eſſential difference between the elaſtic air extricated from Seltzer, and that from common water.

I then diſſolved 20 grains of ſalt of Seltzer water in a large glaſs of lime water, and a calcarious white earth, which fermented with all ſorts of acids, was precipitated; but it weighed no more than 4 grains; yet, by mixing $3\frac{1}{2}$ ounces of Seltzer water with 12 ounces of lime water, before the lime water taſte was quite recovered, and until it ceaſed to depoſit its magneſia, I obtained, after filtration, 7 grains, or better, of a white powder that did ferment with every kind of acid. Hence it is manifeſt, that ſalt of Seltzer

water ſeems to have let go much the greateſt part of its fixed air, and poſſibly thereby to have loſt moſt of the virtues inherent in the pure freſh water itſelf. And this obſervation I find the more neceſſary to make, as, by the late encouragement given by the faculty to the trial of Seltzer water, I have ſeen a ſalt offered to ſale in London, for the ſalts of Seltzer water, which the venders would wiſh to impoſe on the credulous public as the concentrated virtue of this mineral water; but which, from the foregoing experiments, falls infinitely ſhort, in my opinion, of the water itſelf, and is therefore undeſerving the encouragement of the faculty.

By the reſult then of the foregoing experiments, doth it not ſeem probable, that Seltzer mineral water contains, beſides the mere elementary water, a very ſmall quantity of calcarious earth, and a much greater portion of a native mineral *alkali*, together with ſome acid retained a while within the water, but which either evaporates into the open air, or elſe is ſoon combined with the

the mineral *alkali?* And is it not farther probable, that the active virtues of Seltzer water depend more on this elaſtic matter or fixed air, which it contains in ſuch uncommon abundance beyond other mineral waters, than on any combination of its ſaline and earthy contents, which indeed were found in ſuch ſmall quantities, that I cannot deem them capable of any material ſervice, and yet, from experience, I am ſatisfied this water is exceedingly beneficial?

To the truly philoſophical labours of Dr. Black and Dr. Macbride we owe a new Theory of the effects of fixed air acting upon bodies, and of its quality to preſerve animal ſubſtances from diſſolution, and to retard putrefaction. Now, that doctrine may be extended fairly to account for the operation of this, as well as of many other mineral waters, which loſe all their virtues by being expoſed to the open air.

I carefully evaporated a pound weight of German Spa water, in the beſt condition I ever taſted any, and got no more than eight grains of an earthy *alkaline* reſidue, mixed

with much deep-coloured ochre; and, on trial of the ſame diſſolved in pure water, I did not find thoſe ſenſible qualities in the ſolution, which a third of a common glaſs of Spa water would have yielded. The virtues, therefore, of Spa, as well as of Seltzer water, ſeem to be derived from the activity of the fixed air, which, by the decompoſition of the mineral water, and the mutual action of its ſalts, earth, and air on each other, is ſhaken off, and ſet free on the acceſs of the external air; and, by the action of heat, many more of ſuch air-particles, for a long time, continue to eſcape, and becoming thus elaſtic, they ſeem to be the main ſpring of all the powers, and chief ſource of the virtues in this, and many other mineral waters.

And as Seltzer water, taken into our ſtomach, is ſubjected to a degree of natural heat, wherein we found the fixed air to be nearly equal to one-ſeventh of the bulk of the water; may not we then conclude, that the inert and almoſt extinguiſhed action of the finer veſſels and animal fibres, in many acute as well as chronical diſeaſes, may be greatly

greatly renewed by ſuch particles of fixed air coming immediately into action upon them, yet feebly exerting their energy on the more delicate and fineſt fibres, in the courſe of the circulating fluids?

But, as a narrative of a few facts derived from experience will carry along with it ſtronger perſuaſion, than any arguments *à priori* whatever, I ſhall here proceed to ſubjoin the hiſtory of a few medical caſes, wherein the uſe of Seltzer water completed a cure, after a great variety of other remedies had proved inſufficient.

## CASE I.

A young lady, having caught cold in her lying-in, was attacked with a ſlight peripneumonic fever and cough, which, in the country, being too lightly conſidered, and no bleeding at firſt ordered, ſhe ſoon fell into a hectic emaciated ſtate; for which ſhe drank aſſes milk, and took the ordinary balſamic remedies without any benefit, for about three weeks; till one morning, being

ſeized with a fit of coughing more violent than common, ſhe was greatly alarmed at bringing up two or three pieces of a calcarious matter, of different ſizes, from a pin's head to a ſmall pea. Terrified at ſuch appearances, ſhe was conveyed to London, by eaſy journeys, for farther aſſiſtance. The day after her arrival, I found her with a quick hectic pulſe, night-ſweats, and a difficulty and ſhortneſs of breathing on motion up ſtairs. Thus ſhe remained three or four days, when another fit of eaſy coughing brought up, one morning, three pieces more of the like calcarious matter, which, nearly examined, reſembled the conſiſtence of a *pumice* ſtone; and one of them almoſt equalled, in magnitude, the kernel of a ſmall hazel-nut; and, as the ſtrength of her pulſe ſeemed capable of bearing it, I adviſed her to loſe five or ſix ounces of blood, to adhere ſtrictly to a vegetable acefcent diet and milk, in every way that her ſtomach would bear it, and acquieſced in her eating ſome white of a chicken once every day. Her medicine chiefly conſiſted in a cold infuſion of *Peruvian* bark in river water,

water, with ſome grains of *ſpermaceti*, and a few drops of the vinous tincture of *ipecacuana*, with intent to promote a glandular diſcharge from the lungs; whilſt this preparation of the bark was expected to amend the whole of her conſtitution; but the *ipecacuana*, even in the ſmalleſt doſes, diſagreed with her ſtomach, and ſoon after ſhe grew weary of her bark. This made it requiſite to deviſe ſome medicine not ungrateful to her palate: therefore, enjoining the ſtricteſt regularity as to her bedtime, hours of refreſhment, and aſſes milk twice a day, I adviſed her to take thirty or forty drops of dulcified elixir of vitriol in every glaſs of Seltzer water, which was to become her conſtant drink, without wine, or any thing elſe added. By this method, in about three weeks time, ſhe began to recover her ſtrength and ſpirits, and loſe her night-ſweats, cough, and every other bad ſymptom, that had attended her, and ſhe returned home ſeemingly quite recovered; but there, having quite diſcontinued drinking Seltzer water, her hectic heats recurred in her feet and hands, and alſo her troubleſome

ſome feveriſh inquietudes in bed, and other bad ſymptoms, which formerly had worn her down; ſo that, by letter, I adviſed riding on horſeback, and the conſtant uſe of Seltzer water daily, which, in two months, perfectly reſtored her health; and ſhe has been near five years quite well, and never ſince coughed up any calcarious ſubſtances.

## CASE II.

In the beginning of January 1767, I attended a lady, attacked at firſt with ſo many of the uſual ſymptoms of an inflammatory fever, that, though ſhe was naturally of a lax habit of body, I ventured to direct a ſmall quantity of blood to be taken from her arm; but though it had a thick buffy ſize on the ſurface, ſhe ſunk ſurpriſingly by the loſs, and within twenty-four hours a *nauſea*, with reaching, became ſo intolerable, that I judged a gentle emetic neceſſary, as ſoon as ever her ſtrength ſeemed capable of the fatigue of its operation; wherefore (as I moſt frequently do) I here preſcribed

preſcribed half an ounce of the vinous tincture of *ipecacuana*, with half a grain of *emetic tartar*. I have long obſerved, that a cautious uſe of this antimonial preparation, not only with a view to its emetic powers, but alſo when joined, in a ſmaller doſe, as a *diaphoretic* with the common *ſaline* neutral draughts, is one of the moſt valuable remedies in the early ſtages of moſt acute diſtempers, and the uſe of ſuch antimonials at thoſe times, I am free to own, I think a real improvement in the modern practice of phyſick. In the caſe before us, a copious *diaphoreſis*, with a laxative ſtool or two, daily followed, though nothing more heating than the neutralized *ſaline* draughts, ſwallowed in the act of ebullition, were adminiſtered, until the fifth day; at this time a ſour offenſive ſmell in the ſweat ſignified to what claſs of fevers the preſent was to be referred; for, in a great variety of inſtances, on firſt diſcovering this peculiar ſweat, I have, by experience, ventured to prognoſticate, that, within two or three days afterwards, a miliary eruption might be expected; accordingly, in about thirty-

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ſix hours after this ſymptom had been obſerved here, the nurſe found her lady's neck, and all about her wriſts, quite covered with this kind of raſh, which, within twenty-four hours, was alſo ſpread thick all over the trunk and extremities of her body; but, univerſal as it was, it certainly was not critical, and I therefore take this occaſion to ſuggeſt my opinion from obſervation, that miliary eruptions in fevers ſeldom deſerve to be reckoned critical: for, on the twelfth day, though my patient had endured one entire deſquammation of large, clear, pellucid veſicles, yet her dejection of ſpirits, involuntary ſighing, pale crude urine, and a tedious train beſides of thoſe nervous affections, which ſometimes happen in fevers, came on again, or increaſed; and therefore a warmer regimen in diet and medicine ſeemed to be called for: Blifters, therefore, were applied, and repeated from time to time; alſo, wine and water, and a cordial draught of the decoction of Virginia ſnakeroot, with ʒſs. of cordial confection, were preſcribed, and repeated as often as her ſymptoms required, or her ſtomach would endure

endure it; yet, though all that I have mentioned was adminiſtered, together with a free uſe of the Peruvian bark, ſtill ſhe ſeemed unlikely to conquer this obſtinate diſeaſe: but though the eruption was ſo copious and univerſal, yet I adviſed clean bed-linen and that my patient might be taken daily out of bed, or whenever her ſtrength and ſpirits would bear it, and to change whatever about her at any time became nauſeous or ungrateful by the ſweat, carefully avoiding too much heat from the fire in her chamber, or a load of bed-clothes; and, as the ſeaſon was not ſevere, I alſo recommended to refreſh the room, by opening the windows at intervals, and permitted her to ſuck ſweet or ſour oranges, or to eat roaſted apples, &c. But I never found any undue check, or ſuppreſſion of the eruption, from this regimen, though I have learned to rely on this manner of treating this diſeaſe, altogether as much as on medicines; yet, after four ſucceſſive crops of freſh eruptions, within forty-ſix days, to the very laſt, a low creeping pulſe, and proſtration of ſtrength and ſpirits remained, together with many more of that horrid train of nervous ills, which, alike in

fevers as often in their abſence, renders life a wearifome and intolerable burden. Having juſt already mentioned the bark, I think it neceſſary to add, that I began its uſe early in this fever; and having found the cold infuſion in river water, after four days, unaccompanied with either good or ill effects, I proceeded cautiouſly to add and increaſe a quantity of powder in the infuſion, to as much as her ſtomach would endure without load or ſickneſs: and thus, by the end of the fifth week, the virtues of full ſix ounces of this powerful remedy, in ſubſtance and infuſion, appear, on the apothecary's file, to have been fairly tried: nevertheleſs a freſh eruption ſo late in the diſeaſe appeared; but the ſweat was then not ſo rank, nor the teazing incoherent fancies, which, between ſleeping and waking, without perfect *delirium* at any time, had all along terrified her, now ceaſed even without an opiate; though, having no prejudices againſt opiates uſed with caution in ſome ſtages of nervous fevers, I had tried repeatedly a few drops of TR. *Thebaic:* when preſſing ſymptoms ſeemed to indicate, that

that they might be ſerviceable; yet, under the lateſt eruption, hot ſweats, extreme proſtration of ſtrength and ſpirits, and deſpair of recovery, excited in her an inſuperable averſion to the uſe of every other drug but the cold infuſion of bark, with a large teaſpoonful of dulcified ſpirits of vitriol twice a day. About half a pint of old hock through the day, diluted with water, was her cordial. But neither this courſe, nor aſſes milk, nor airing daily in a coach, nor removing from town altogether into country air, were able to remove her troubleſome inquietudes, or reſtore her natural ſleep, or utterly to carry off the remains of her weariſome and long-continued illneſs. At length I prevailed on her to drink daily a full quart of Seltzer water; by which, within three days, ſhe felt a remarkable abatement of all her obſtinate ſymptoms, and, within the week after trial, ſhe was reſtored to perfect health and ſpirits, and the ſame have continued unimpaired ever ſince: for, whenever any ſlight feveriſh indiſpoſition attacks her, living in the career of modiſh life, ſhe forthwith recurs to Seltzer water,

and before ſhe uſes ſix or eight bottles of it, with the addition of a drachm of powder of Peruvian bark, ſhe feels herſelf reſtored to health and good ſpirits; and by this practice, ſhe hath enjoyed more, and better health, ſince that time, than ever ſhe had before. All this happy alteration in her conſtitution, ſhe declares, by experience, ſhe derives from this pleaſant remedy; the free uſe of which aſſuages quickly all her irregular feveriſh heats and hectic fluſhings, which heretofore preyed upon her eaſe, and made even life itſelf almoſt intolerable.

## CASE III.

A middle-aged woman, labouring with a hard quick pulſe, a great oppreſſion on her breaſt, and a violent pain in the region of the liver, extending to the right *pleura*, ſent for me to attend her, 28th July 1768. On inquiry, I found ſhe had been drooping near three weeks before, but had ſuffered no evacuation either by bleeding or purging all that time. In theſe circumſtances, I did not heſitate to order ſeven ounces of blood

blood to be taken from her arm; but notwithſtanding the blood, when cold, exhibited as buffy ſize on the ſurface as uſually happens in a pleuriſy, yet, within twenty-four hours afterwards, her ſpirits were exceedingly ſunk, and her ſtrength forſook her entirely, though ſhe confeſſed ſhe was greatly relieved of the excruciating pains in her ſide. She, however, conſtantly complained of ſome degree of uneaſineſs in her throat on ſwallowing; and, upon inſpection, the *fornix* and back parts of the mouth appeared uncommonly pale. Some parts were dry, whilſt others, within twelve hours, diſcharged a viſcous ſlime; and between the lower parts of the *fornix* and the *tonſils*, a large black ſpeck appeared on each ſide. She had, moreover, an eruption and ſwelling about her noſe and lips, and a raſh all over her neck and body. Theſe appearances induced me to order the bark, half a drachm of which was given every four hours for ſeveral days, as her ſtomach would bear it; but within twelve hours the diſcharge of ſlimy *mucus* increaſed to near three quarts a day, and

thus continued more than three weeks afterwards. This diſcharge from her noſe as well as mouth, of a moſt intolerably fœtid *ſanies* and *mucus*, appeared to me no other than nature's effort to relieve her; for it was not brought on by the uſe of any ſtimulating gargles, as from the firſt ſhe could not bear the mildeſt of the common ſorts, with only a little vinegar; for the white of a new laid egg, beat up with about ſix ounces of roſe-water, was all that ſeemed to help her to any eaſe. By the uſe of this, ſhe brought away ſurpriſingly great quantities of ſolid black ſloughs, ſo as to leave a large hole in that part where the blackneſs at firſt appeared in her throat. Within fourteen days, beſides four ounces of Peruvian bark, adminiſtered by infuſion and in ſubſtance, I had alſo tried *ſerpentaria*, *virginiana*, and *confectio cardiaca*, in as large doſes, and as often repeated, as her ſtomach would bear; and I had perſuaded her to take ſome port-wine in mint-tea daily, to ſuch quantities as her languid ſtomach ſeemed to require. A ſlight incipient delirium now made me cautious

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in perſevering in the infuſion of bark *only*; ſo that I ſubſtituted decoction of *ſerpentaria* with vinegar and anodynes, ſuch as *TR. thebaic*, 3, 4, or 5 drops every ſix or eight hours, or volatile, camphorated, or muſk juleps, and whatever other remedies are uſually tried in ſuch caſes; yet no medicine ſeemed ſenſibly to counteract the inveteracy of this terrible diſeaſe. Having well conſidered the cloſeneſs of the air in her chamber, and experienced how little ground was hitherto gained by medicine ſo long adminiſtered, and in no trifling quantities, I adviſed her, even under the fever, and ſpitting as much as ever, to be carried above three miles out of town. After the third day, I had ſtill the mortification to find my patient ſunk with deſpair and diſeaſe, and her ſtomach, at length, nauſeated every ſpecies of medicine. In order therefore, to adminiſter the laſt relief in my power, and having at that time the analyſis of Seltzer water under my conſideration, I judged, from the contents, it might not be unlikely to prove ſerviceable, if three pints, or more, were drank every day, in the

inſtant of pouring it from the bottle; expecting, that the fixed air of this water, juſt ready to eſcape, might be imbibed into her putreſcent ſolids, whoſe elaſticity and power of reaction might thereby come to be reſtored. Whatever way it acted is not ſo much to the purpoſe, as that, after drinking a bottle, or 3 pints, a-day, for three or four days, her immoderate ſpitting manifeſtly abated; her hot diſagreeable ſweats daily leſſened, till by degrees, in one week more, ſhe found herſelf, though greatly weakened and emaciated by diſeaſe, yet reſtored to her natural ſleep, and her appetite returned without any remains of fever. In ſhort, within three weeks from her beginning this courſe, and drinking aſſes and cows milk freely, her health was tolerably reſtored; and ſhe ſo continues ever ſince, excepting that for ſix months afterwards ſhe had not menſtruated.

I have now fulfilled my firſt intention of ſubmitting the foregoing ſketch of the hiſtory of Seltzer water, and its efficacy, to the conſideration of this ſociety; and I ſhall be abundantly recompenſed for the pains

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I have taken, if what hath been ſuggeſted in this paper, tends to excite the attention of practitioners in general throughout the Britiſh dominions, to the trial of this water; particularly towards the end, as well as often, in other ſtages of ſeveral acute and ſome chronical diſeaſes. I am well convinced it might at leaſt prove of ſome utility, by offering to our nauſeating and languid patients, at proper times, a new and untried pleaſant remedy, by which that impatient eagerneſs in human nature, to fly, in extremities, to dangerous and enterpriſing quacks, might be diverted, or properly reſtrained: for theſe, by the boldeſt promiſes, and ſometimes by the moſt hazardous expedients, keep up their deceit, to the unſpeakable miſchief and prejudice of mankind.

III. *Remarks on the* Hydrocephalus internus, *by* John Fothergill, *M. D. F. R. S. Read* Auguſt 8, 1768.

I HAVE for a long time propoſed to myſelf, to lay before you ſome account of a diſeaſe which occurs more frequently, I believe, than is generally apprehended, and is very often confounded with another, to which, in many reſpects, it appears not diſſimilar; yet ariſes from a very different cauſe. At the ſame time, I muſt own to you, it is not in my power to ſuggeſt any probable means of curing the diſeaſe of which I treat: it has baffled all my attempts, both when confided in alone, and in conſultation with the ableſt of the faculty. All that I pretend to do is, to exhibit ſuch an idea of this diſeaſe as may ſerve to make it known when it occurs in practice, and to form ſuch a prognoſtic of its progreſs and event, as may juſtify practitioners to themſelves, and to the families in which ſuch fatal occurrences may preſent themſelves.

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I have juſt peruſed Dr. Robert Whytt's hiſtory of this diſtemper, in his works, lately publiſhed, in a tract at the end. The Doctor has done more in elucidating this ſubject, than any of the writers I have ſeen. It will appear from what I have to ſay on this ſubject, that we perfectly agree in the ſeat of the diſeaſe, in moſt of its ſymptoms, and in its fatality. Nevertheleſs, in ſome points, our obſervations have led us to make different concluſions.

The diſeaſes to which this I am treating of bears the neareſt reſemblance, are ſuch as are ſuppoſed to proceed from worms; and what increaſes the reſemblance is, that they are, for the moſt part, diſeaſes of the ſame age. I have ſeldom met with the *hydrocephalus* in ſubjects younger than three years; moſt frequently it has happened, in my practice, from five to ten; two or three from ten to thirteen, and two caſes between ſeventeen and nineteen years of age. The laſt four were girls; the former moſtly boys; and none of them peculiarly unhealthy before they were attacked with this diſeaſe. Moſt of them had

had gone through the ſmall-pox, ſome the meaſles likewiſe; but without any reaſon to ſuſpect that theſe had left any foundation for this terrible complaint.

It happened, that ſeveral of thoſe who firſt of all came under my care in this diſeaſe, were either the favourites of the family or the ſole hopes of their parents. I do not mention this as having any thing to do with the diſeaſe itſelf, but as the cauſe of my not being able to learn what the diſtemper really was, ſo ſoon as I could have wiſhed. It was difficult to aſk, and ſtill more difficult to obtain leave, under ſuch tender circumſtances, to examine the ſubject. At length, however, I ſucceeded, and, in ſeveral diſſections, found the ſame cauſe ſubſiſting; viz. a collection of clear pellucid lymph, amounting in quantity, by appearance, to 2, 3, or 4 ounces, contained in the ventricle of the brain, under the *corpus calloſum*, from whence it was impoſſible to diſcharge it by any medicine or operation hitherto diſcovered.

The firſt caſe I met with I ſuſpected was owing to worms, and thought myſelf fully

fully juſtified in exhibiting the moſt efficacious anthelminthics I was acquainted with, applying ſuch other remedies as particular exigencies required. When another caſe like this caſt up, I early took the alarm, and requeſted aſſiſtance; but we were as unfortunate as I had been before. Once, ſometimes twice in a year, for ſeveral ſucceeding years, I had occaſion to ſee theſe unhappy objects. Of late years, they have not occurred to me quite ſo frequently, though I am now lamenting a diſaſter of this ſort, which has deprived a large and honourable family of the only male amongſt them.

Two or three inſtances I have met with, that had very ſtrong appearances of being entered into the laſt ſtage of this diſorder, but were happily recovered; they were actual worm-caſes, and were cured by anthelminthicks. I had been led, from theſe appearances that were ſo ſimilar to thoſe which attend the *hydrocephalus*, to judge it was the ſame, and to form an unfavourable prognoſtic.

Dr. Whytt ſuppoſes, that the commencement of this diſeaſe is obſcure; that it is generally ſome months in forming; that, after ſome obvious urgent ſymptoms make aſſiſtance neceſſary, it continues ſome weeks before it ends fatally. This, in general, differs from what I have hitherto obſerved. I have ſeen children, who, from all appearance, were well, healthy, and active, ſeized with this diſtemper, and carried off in about fourteen days. I have ſeldom been able to trace the commencement of it above three weeks. We know very well how often thoſe who are unacquainted with theſe things aſcribe the beginning of diſorders to wrong cauſes, and date them from æras with which they have no connection. Thus every malady to which a child may be incident through the courſe of many years, ſhall be attributed to the ſmall-pox, a worm fever, or ſome other diſeaſe, that has thoroughly rouſed the parents fears, though that very diſeaſe may have been happily terminated. One cannot be ſufficiently upon one's guard in aſcribing effects to cauſes that exiſted at a remote period.

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In moſt of thoſe whom I have ſeen in this diſtemper, a pain in ſome part or other below the head was the firſt thing they complained of; moſt commonly about the nape of the neck and ſhoulders, often in the legs, ſometimes in the arms, but more rarely.

This pain was not always alike acute, nor always fixed to one place; ſometimes it ſeemed not to affect any of the limbs. In theſe caſes, the head and ſtomach ſeemed to be more diſordered; and indeed were always diſordered more or leſs from the beginning, as far as I could learn. When the pain was in the limbs, the ſickneſs or headach was leſs; when the head became the ſeat of complaint, the pain in the limbs was ſeldom or ever mentioned: ſome had very violent ſickneſſes, and violent headachs alternately.

From being perfectly well and ſportive, ſome were ſeized with theſe pains in the limbs, or with ſickneſs, or headach ſlightly, in a few hours, commonly after dinner. Some have been obſerved to droop a few

days before they complained of any part being much indiſpoſed. In this manner they continued three, four, or five days, more or leſs, as the children were healthy and vigorous, when the diſtemper begins to ſhow itſelf in an alarming manner.

They then commonly complain of a moſt acute pain in the head, deep ſeated, and extending acroſs the forehead from temple to temple. They are generally very ſick between whiles, crying out in the moſt affecting manner, *Oh, my head! Oh, I am ſick!* alternately, and with ſhort intervals: doſing a little in theſe intervals, breathing irregularly, and ſighing much while awake. Sometimes they only ſeem to breathe in ſighs for ſome minutes together.

The pulſe, from being regular as in health, as the diſeaſe creeps on, becomes irregular; ſlower, for the moſt part, at firſt than it ought to be; it grows ſtill ſlower as the pain increaſes, gradually likewiſe irregular, the ſtrokes being made both with unequal force and in unequal times. The limbs, for the moſt part, are temperate, in reſpect to heat, after the firſt acceſs, which

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is often attended with feveriſh heats, eſpecially towards evening and forepart of the night, and till within a day or two of their diſſolution; the pulſe then becomes extremely quick, the breathing deep, irregular, and laborious, the heat exceſſive and more general. The head is always hot from the firſt attack, and the *præcordia* likewiſe.

Almoſt every ſymptom that is known to attend an irritating cauſe exiſting in the brain, appears in its turn; firſt, pain in the limbs, ſickneſs, and headach.

Short diſturbed ſleeps, ſtartings, irregular pulſe, watchfulneſs, and the pupils of the eyes much dilated.

They are unwilling to be diſturbed for any purpoſe, are averſe to light, take things greedily, and cannot bear any poſture but that of lying horizontally. They attend leſs to objects; when aſleep, great part of the whites of the eyes are ſeen, and are undiſturbed by any thing but moving them. Their urine comes away inſenſibly, and their ſtools likewiſe. They often ſcream out moſt piercingly, but complain of nothing.

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One or both hands are moſt commonly about their heads. At length the eyelids become paralytic, the *iris* immoveable: it gives them no apparent uneaſineſs, if one raiſes the eyelids with one's finger two or three days before they die. The heat of the head and trunk becomes exceſſive; a great heat and ſweat ſpreads over the whole body, reſpiration is altogether ſuſpirious, the pulſe trembling, and quick beyond the poſſibility of counting, and the patient goes off gradually as the ſtrength fails; ſometimes a ſpaſm finiſhes the cataſtrophe.

One ſees, in this recital, many ſymptoms that are familiar to worm-caſes, teeth, and other irritating cauſes. Perhaps, it will be difficult to point out any that ſhall particularly characteriſe this diſeaſe. The pains in the limbs, and inceſſant headach, and ſickneſs, ſeem to me the moſt certain intimations of the danger. Theſe happen in other diſeaſes of children, but neither ſo uniformly nor ſo laſtingly.

Another circumſtance likewiſe is familiar, if not peculiar to this diſeaſe: I recollect not one inſtance, in which the patient was not

not coſtive, and in which likewiſe it was not without ſingular difficulty that ſtools were procured.

The ſtools are moſt commonly of a very dark greeniſh colour, with an oilineſs or a glaſſy bile, rather than the ſlime which accompanies worms. They are, for the moſt part, ſingularly offenſive. The urine ſhews nothing to be depended on: it is various both in colour and contents in different ſubjects; depending chiefly on the quantity of liquids they get down, and the time between the diſcharges of urine. From their unwillingneſs to be moved, they often hold their water a long time; twelve or fifteen hours, ſometimes longer; they ſeldom complain of their belly: indeed when they complain of ſickneſs, they mention their belly; but, if one deſires them to point to it, they always lay their hand on the ſtomach. In diſorders from worms this is not ſo generally the caſe. In theſe complaints, and thoſe attending dentition, ſpaſms are more frequent than in the diſtemper I am deſcribing. Children ſubject to fits, are ſometimes ſeized with them a

few days before they die; ſometimes they continue for twenty-four hours inceſſantly, and till they expire; but this is not conſtant.

The moſt certain character marks itſelf indeed but too evidently, when one ſees all thoſe ſymptoms gradually advancing which attend a violent depreſſion of the ſcull; when a comatous oppreſſion ſeizes the brain, and diminiſhes, by degrees, all the faculties, till they are at length totally extinguiſhed, either by ſome violent ſpaſmodic efforts, or the *vires vitæ* are exhauſted.

With Dr. Whytt, I have called this diſeaſe the *Hydrocephalus internus*, or dropſy of the ventricles of the brain, till ſome more appoſite name can be given to it. From what remote cauſes it may proceed, I am not ſo well ſatisfied as to decide on this point. Whether the breach of a lymphatic may not more commonly be the proximate cauſe, is ſubmitted to conſideration. It is a diſorder that happens, ſo far as I have had an opportunity of obſerving, more commonly to healthy, active, lively children,

children, than to ſuch in whom, from previous indiſpoſition, there is room to ſuſpect an unequal or weakened abſorption.

And indeed, if we conſider the numberleſs little feats of activity that children of both ſexes are diſpoſed to, we cannot wonder that a veſſel of ſlight texture ſhould give way on ſome occaſion or other. I am the more inclined to be of this opinion, from the progreſs of this diſeaſe in many of the caſes that I have ſeen of it; from reflecting on the *juvantia* and *lædentia*; and, from this circumſtance being generally true, that in ſtrong vigorous conſtitutions, the diſeaſe is fatal in a ſhorter time, than in the tender and diſeaſed, though perhaps not leſs active diſpoſitions. Sometimes I have been told, that the diſeaſe was thought to have taken its riſe from jumping from a conſiderable height upon a hard floor, a fall, or ſome pretty ſmart exerciſe: but however favourable ſuch accounts may be to the opinion already mentioned, yet I offer them with diffidence, and only with a view to promote further inquiry.

Were I to recite the different attempts to cure this diſeaſe made both alone and conjunctly with ſome of the ableſt in the profeſſion, it would carry me beyond the bounds you have a right to preſcribe. It may be ſufficient to mention, that, whenever I am called to a patient in the earlier ſtages of this diſtemper, I proceed in the ſame manner, as if the diſeaſe was ſuppoſed to ariſe from worms, or ſome cauſe of irritation capable of being removed.

Three or four grains of *calomel*, or more, according to the age and habit of the patient, with *rhubarb* and the *pulv. e ſcam. compoſ.* are given to empty the bowels, if this has not been done before ſufficiently. If the ſtomach appears to be loaded, $\frac{1}{4}$ or $\frac{1}{2}$ a grain of the *emet. tartar.* may be joined with it, and the ſtomach waſhed with any ſuitable liquor.

After this, it ſeems prudent to abate the vomiting by the ſaline, abſorbent medicines, adding a few drops of the *tinct. theb.* as occaſion requires, giving broth, thin decoctions of hartſhorn ſhavings, and other ſuitable ſupport, as may be neceſſary.

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Anthelminthics in broth are thrown up in clyſters, and ſmall doſes of anodynes occaſionally exhibited. A decoction of *ſem. ſanton.* with 30 or 40 drops of *ol. terebinth.* in 3 or 4 ounces of broth; or aloes boiled in milk. All heating medicines ſeem to increaſe the malady; ſo does much warmth in the room.

If the diſeaſe actually proceeds from worms, the ſymptoms are moſt commonly at a ſtand after this proceſs, and, by a repetition, at proper diſtances, it ſoon gives way; but, if the ſymptoms not only continue, but increaſe after a prudent repetition of theſe medicines, or ſuch as different practitioners may have found to be ſucceſsful in worm caſes, there is too much reaſon to fear that the diſtemper is of a more fatal kind, and that the moſt ſtrenuous and well-directed endeavours will probably afford no relief.

One ought not, however, to ceaſe attempting to mitigate the moſt preſſing ſymptoms, by all the means in our power. The application of bliſters, ſinapiſms,

embrocations externally; the leſs heating antiſpaſmodics, internally; and, at all times, taking care to keep the bowels, as much as may be, free from impurities, will, perhaps, afford ſufficient means to anſwer every reaſonable indication.

I need ſcarcely mention, that every opportunity of inſpecting the body ſhould be ſought for by the faculty. Dangerous and incurable as it ſeems to be, its ſeat only known, and its fatal iſſue, we ought not to deſpair of tracing its beginning a little higher, aſcertaining the cauſes, and fix its character with more preciſion. By treating the complaint, however, in the manner above-mentioned, we loſe no advantage: we are almoſt ſure to ſucceed if the caſe be only worms; but if otherwiſe, we at leaſt are treating it in the moſt rational method, increaſing all the ſecretions, and thereby preventing any addition to the quantity of extravaſated fluid, to the utmoſt of our power.

From the preceding deſcription of this caſe, it will not be difficult to account for the ſymptoms; nor will it appear ſurpriſing, that

that the patients go off in the ſame manner as thoſe who die of a depreſſion of the ſcull; for it makes very little difference whether the external parts of the brain are crouded on the more central parts, or a fluid is perpetually preſſed into the cavities, near the center, ſtrongly forcing their ſides and the brain itſelf againſt the ſcull. So far as one can learn from the unhappy ſubjects themſelves, the kind of pain they feel, is not quick and darting, or like that of a boil or inflammation; but, though acute, is tenſive, and as if forcing the head aſunder.

When this paper was read to the Medical Society, Dr. Huck ſaid, he believed that this diſeaſe was not confined to children, or ſuch as were under puberty only; for he imagined that he had ſeen it two or three times in adults, and gave me the following caſe, where diſſection put it out of doubt.

Hannah Hargrave, aged 30, was admitted into the Middleſex hoſpital, on the 25th of October 1768. She was extremely

languid, and ſo oppreſſed, that ſhe could not give a very diſtinct account of her illneſs. She ſaid, that ſhe had been ſick a week; that her chief complaint was a moſt excruciating pain in her head, with a vomiting of every thing ſhe took, mixed with green ſtuff: ſhe ſaid ſhe was coſtive, giddy, thirſty, had great palpitations, and could get no ſleep: her heat was not greater than in health: her pulſe beat 78 ſtrokes in a minute; ſhe had her menſes at that time. No means that were uſed gave her any relief: the headach, vomiting, though leſs frequent, and watchfulneſs, continued. On the 4th of November ſhe was lightheaded, ſighed and moaned frequently: the pupils of her eyes were greatly dilated, and I thought ſhe could not ſee. On the 5th, I firſt obſerved a *ſtrabiſmus*; ſhe gathered up the bedclothes; her teeth were furred; but her tongue was not very dry; her pulſe was almoſt like to that of a perſon in health.

On the 6th, ſhe ſeemed every way worſe, continued muttering, moaning, always without ſleep, and paſſed her urine involuntarily,

luntarily. Her pulſe beat 88 ſtrokes in a minute.

She died on the 7th, and her body was opened by Mr. Tickel houſe-ſurgeon, the next day, in preſence of ſome of the pupils and myſelf. Nothing very remarkable was found, except about four ounces of water in the ventricles of the brain, and a larger quantity than uſual in the *theca vertebrarum.*

I have likewiſe ſeen two caſes lately of the like kind to appearance. Both were women: the firſt about 17, unmarried; the ſecond about 25 married; and both apparently healthy, till they were ſeized with ſymptoms much reſembling thoſe deſcribed by Dr. Huck. Though there was no opportunity of confirming this opinion by diſſection; yet, from the ſimilarity of the ſymptoms, there was juſt ground to conclude, that this diſtemper is not ſolely confined to the age of childhood.

## IV. *An Account of a Rupture of the Bladder from a ſuppreſſion of urine in a pregnant Woman, by Mr.* Hey, *Surgeon at* Leeds, *communicated by* W. Hunter, *M. D. F. R. S. Read* 8 Auguſt 1768.

ON Monday morning, March 7th, 1768, I was deſired to viſit Mrs. —— about 38 years of age, in labour of her firſt child. The midwife, who was attending her, informed me, that the labour-pains began on Saturday morning, (the 5th), the membranes being then broken, and the head of the child lying low in the *pelvis*; that the *os tincæ* had been fully dilated ſince Saturday night; and that, on Sunday noon, the head was nearly as much advanced as when they ſent for me.

Upon examination, I found the *vertex* preſſing upon the inferior part of the *rectum*, and one of the ears contiguous to the *ſymphyſis* of the *oſſa pubis*; but there was no tumor in the *perinæum*. The pains were moderately ſtrong and regular; the pulſe

pulſe very good. Finding all the ſymptoms ſo favourable, I left my patient to the care of her midwife.

In the evening I was ſent for again, and found every thing nearly in the ſame ſtate, only the head was more advanced, ſo that a ſmall part of the ſcalp remained without the *os externum*, even during the abſence of the pains. As the chief reaſon of conſulting me was, to know whether it was moſt proper to deliver immediately by art, or wait for the farther effect of the natural pains, I again left her, after adviſing the latter method.

I heard no more from her till the Saturday following, (12th), when I was requeſted to viſit her early in the morning. I found her ſitting up in bed, and complaining of great pain in the *abdomen*, which was conſiderably diſtended: her reſpiration was ſomewhat quick and laborious: ſhe could not bear to lie down, becauſe both the pain and difficulty of breathing were thereby much increaſed: ſhe had much oppreſſion at her ſtomach, which ſhe judged to ariſe from flatulency, and was almoſt perpetu-

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ally belching, though nothing ſeemed to be diſcharged. The eructations reſembled thoſe that often attend the *iliac paſſion*, eſpecially in the laſt ſtages, when the contents of the ſtomach are brought up into the mouth in ſmall quantities. She was very thirſty: her pulſe was quick, making 124 ſtrokes in a minute, ſomewhat full, but oppreſſed.

I inquired concerning her ſtate from the time I had ſeen her in labour, and received the following account: That ſhe was delivered of a dead child on Tueſday evening, the day after I ſaw her; that ſhe reſted very well that night, and the next day in the forenoon; but in the afternoon began to be uneaſy, and to complain of a pain in the *abdomen*, which particularly affected the *hypogaſtrium*, and the whole region of the *pelvis*; that ſhe became very thirſty, yet could not bear to drink much; that ſhe had ſometimes brought up a little yellowiſh fœtid matter with a kind of belching, which ſhe had alſo done in labour; that ſhe had ſlept very little ſince Wedneſday forenoon; that ſhe had had a frequent motion

motion to make water, but ſeldom diſcharged above a tea-cupful at once, the motions being ſometimes ſo ſudden, that ſhe was obliged to receive her urine upon clothes, in which manner it had flowed from her all the preceding (Friday) night; that ſhe had gone to ſtool once every day; that her breaſts had not been full or uneaſy, nor had the milk yet flowed from them; that the *lochial* diſcharge had been very ſmall, and had become ſerous on the ſecond day; that as ſhe was raiſing herſelf up, about an hour before I viſited her, ſhe felt ſomething *crack* (as ſhe expreſſed it) at her navel, and the pain became immediately ſevere about that part.

I took five ounces of blood from her arm, applied a large bladder a third-part full of warm water to the *abdomen*, and ordered her to take two ſpoonfuls of a ſolution of *ſal cathart. amar.* frequently, till it ſhould begin to operate. She took an ounce and half of the ſalt that day, and had four eaſy ſtools. She became eaſier ſoon after the bleeding, breathed with more freedom, and could bear to lie down in bed.

In

In the evening I found her much relieved; her pulſe riſen, and her ſkin, which had before been dry, covered with an agreeable moiſture. I obſerved the *craſſamentum* of the blood to be firm and ſomewhat ſizy.

Sunday morning (13th) I found the unfavourable ſymptoms returned. She had become reſtleſs in the night; the ſweating was gone off, and the pain in the *abdomen* ſomewhat increaſed, though not ſo ſevere as yeſterday morning; her pulſe was quicker and more oppreſſed; ſhe had thrown up ſome mutton-water which had been preſcribed for common drink, and had the ſame frequent belching and oppreſſion at her ſtomach.

I took away immediately ſix ounces of blood, and upon obſerving that it had a more ſizy appearance than the former, and that the pulſe was not weakened by the evacuation, I untied the arm and drew off three ounces more: I adviſed the uſe of a *ſemicupium*, and ordered her to drink ſometimes a cupful of weak coffee, and ſometimes of the *emulſio communis*, by way of

of common drink. The bleeding relieved her again, but not ſo much as before.

At noon I thought it proper to introduce the *catheter*, as ſhe had then made no water for thirty hours. The introduction was performed with difficulty, the paſſage of the inſtrument being obſtructed about the middle of the *urethra*; at length the inſtrument paſſing into the bladder, about ſix ounces only of dark-coloured muddy urine were diſcharged.

A phyſician was conſulted, who ordered the application of a large bliſter to the *abdomen*, and the frequent injection of broth-clyſters.

Monday (14th) ſhe had ſlept very little in the night; her pulſe beat 140 ſtrokes in a minute, and was weaker. The diſtention of the *abdomen* was the ſame; but ſhe rarely complained of pain in it, except upon preſſure; her anxiety, however, and oppreſſion, were greater. She had three or four ſtools in the courſe of the day: her urine was diſcharged frequently in ſmall quantities upon the clothes, as before.

Tueſday (15th) the ſame ſymptoms remained; but the pulſe was become more calm, though weak: ſhe did not ſpeak ſo diſtinctly, and took leſs notice of thoſe about her.

Wedneſday (16th) the pulſe ſtill ſlower, (118) but more ſunk. The eructations, and the diſtention of the *abdomen*, continued the ſame. She ſtill complained of thirſt, but had not vomited ſince Sunday. Her ſpeech and apprehenſion were very indiſtinct, in the morning when I viſited her: ſhe did not ſpeak afterwards, and died about eleven at night.

I was permitted to inſpect the contents of the *abdomen* the day after her death, which I did, in company with Mr. Lucas, a ſurgeon of this place. We were ſenſible of the exiſtence of ſome fluid in the *abdomen*, by patting it with our hands; we therefore opened it cautiouſly, and took out the fluid with ſpunges, which, by the ſmell, ſoon diſcovered itſelf to be urine. Upon looking for the ſource of this extravaſation, we perceived an aperture in the

ſuperior

ſuperior part of the bladder, large enough to admit the introduction of a finger. The edges of this aperture were jagged, and of a blackiſh colour; the reſt of the bladder appeared to be ſound. None of the inteſtines were inflated; on the contrary, they were more contracted than they are uſually found to be, eſpecially the *colon:* their blood-veſſels were turgid in ſome places; particularly on the right ſide of the *meſocolon;* but, in general, the inteſtines, and their appendages, had a very ſound appearance. The ſtomach was conſiderably inflated. The *uterus* appeared to be in a ſound ſtate, and was ſufficiently contracted, conſidering that the woman died the ninth day after delivery. There were two ſmall tumors on its poſterior part, which, when cut into, ſeemed to be only an enlargement of its ſubſtance; they were covered with the *peritonæum*, like the reſt of the *uterus.* Some ſmall hydatids lay contiguous to the Fallopian tubes, and one on each ſide was connected with the broad ligament by a long pedicle.

The quantity of urine contained in the abdominal cavity amounted to fourteen pints.

We did not open the *thorax.*

After this examination, we inquired of the nurſe, and ſome friends of the deceaſed, who were in the houſe, and had been preſent at the labour, how ſhe made water before delivery. They told us, ſhe had made none for two days and nights before ſhe was brought to bed. But the midwife afterwards aſſured me, that although ſhe had diſcharged no urine with a *ſtream* during the time mentioned, yet that it was continually flowing from her upon the clothes; and that ſhe did not complain of any motion to make water, which the aſſiſtants had likewiſe affirmed to us. Both the nurſe and midwife had obſerved an uncommon fulneſs in the *abdomen*, when they put her to bed after the delivery; but neither of them examined it afterwards. The midwife told me farther, that, upon being placed in an erect poſture juſt before ſhe was put into bed, ſhe immediately complained of a motion to make water; but

but being laid down, the motion went off for two hours, at the end of which ſhe voided about a pint of urine. She had two ſtools that night, and made water again, but in ſmall quantity. I could not learn, that ſhe had been ſubject to any complaint in the urinary paſſages before pregnancy; nor that, during pregnancy, ſhe had been afflicted with a ſuppreſſion of urine.

If the bladder was ruptured during labour, (as to me ſeems moſt probable) it is ſurpriſing, that the diſtention, which it muſt have ſuffered previous to that fatal accident, did not cauſe a ſevere pain in the *hypogaſtrium*; yet the midwife did not remember that the woman had any complaint of that kind during the intervals of the pains, which were always regular and natural. I do not ſo much wonder that ſhe did not complain of a motion to make water, becauſe I have known the bladder ſo greatly diſtended with urine in time of labour, as to form a large painful tumor in the *hypogaſtrium*; and, conſequently, require the introduction of the *catheter*, though

the patient gave no intimation of that ordinary call of nature. As far as I can judge, the uſe of this inſtrument is very rarely neceſſary during labour; but, upon this very account, there is greater danger of not attending to the ſymptoms, which indicate the neceſſity of uſing it, when that neceſſity really occurs.

Although the *method of prevention* be the grand affair, with reſpect to the diſeaſe mentioned in the preceding hiſtory; yet the diagnoſtic ſymptoms are not to be neglected, as a juſt knowledge of the diſeaſe may be of conſequence, when the prevention is out of our power. I have endeavoured to throw all the light I could on this matter, by a faithful relation of all the circumſtances worth notice, which I became acquainted with, either by my own immediate obſervation, or the relation of others.

## V. *Of the Cure of the* Sciatica, *by* John Fothergill, *M. D. F. R. S. Read* 22 Auguſt, 1768.

IT is always the object of my wiſhes, and endeavour, in the duties of my profeſſion, to reduce the cure of diſeaſes to all poſſible ſimplicity: and nothing affords me ſo much ſatisfaction, as when, by repeated cautious trials, a method occurs to me, of curing any diſtemper with ſome degree of certainty, eaſe, and expedition.

I am in hopes, that the method now offered to your conſideration, will be found, by experience, to anſwer the end propoſed, and aſſiſt practitioners in removing an obſtinate painful diſeaſe with leſs difficulty, than by the methods hitherto employed for the purpoſe.

The *morbus iſchiadicus*, or, as it is called in this country, the *ſciatica*, is a diſeaſe too well known by phyſicians to need any deſcription; too painful not to require the ſpeedieſt relief; and ſo obſtinate as to reſiſt many powerful remedies.

In the courſe of my buſineſs, many caſes of this nature have occurred to me, and during a conſiderable part of my time, whenever they occurred, gave me much uneaſineſs. I found the remedies recommended for the cure of this diſtemper often inſufficient, always ſlow in producing a cure, and very often as painful almoſt as the diſeaſe itſelf.

It is at leaſt amuſing to ourſelves, if not inſtructive to others, to mention by what means we become acquainted with uſeful hints. I was deſired, many years ago, to viſit a man ſomewhat above forty years of age, who had long been confined to his bed, from the effects of a *lumbago* imperfectly cured. The violence of the pain was abated, but he was incapable of moving, or being moved, from the place he was laid, without ſuffering grievous torture. The part affected was the lower part of the *lumbar* region, from ſide to ſide, acroſs the loins. His fleſh was much reduced, his appetite decayed, and a feveriſh heat conſtantly attended him, the conſequence of pain and inanition. He had been many weeks

weeks under the care of a very able phyſician, who had attended with much diligence, and preſcribed, with judgment, very efficacious medicines. The patient was reduced to the neceſſity of taking opiates to procure a temporary relief. He had taken them a conſiderable time, and in doſes rather more than moderate, though not very large before I ſaw him.

Not finding any reaſon to ſuſpect either an internal abſceſs, or a tendency to it; but that the ſeat of the pain was in the tendinous parts about the loins, and deep ſeated, I directed a ſmall doſe of *calomel* to be given every night.

The following was the preſcription:

℞ *Calom. levig. gr.* x.
*Tereb. e chio. q. ſ. f. pil.* x. *non deaurandæ. Capiat.* j. *omni nocte.*

A laxative mixture was provided, to be taken in the morning, to procure ſtools, if he ſhould be coſtive. The opiate was gradually omitted.

Finding a grain of *calomel per diem* to have no effect, I ordered him to take two one night, one the next, and ſo to proceed.

His pains rather grew leſs by the time theſe pills were taken; but not the leaſt appearance of any effect from the *calomel* as a mercurial. I increaſed the doſe, till he got up to ſix grains of *calomel* every day, 3 at night, and 3 in the morning; without ever perceiving any tendency to a plyaliſm, purging, remarkable micturition, or diaphoreſis. The pains, however, gradually leſſened; he got up every day, recovered his appetite, got ſtrength, and, in five or ſix weeks time, was able to go abroad. He halted conſiderably, and made uſe of a walking-ſtick; but enjoyed tolerable health, and has not ſince been afflicted with any complaint of this nature.

Six grains of *calomel per diem*, for near a fortnight together, may ſeem a very large doſe to be taken without producing the common effect of mercurials. It ſurpriſed me at the time; and I ſhould by no means have proceeded to ſuch a length, if experiment, conducted with ſome degree of caution, had not led me ſo far in this particular inſtance.

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A gentleman of great eminence in chymiſtry had aſſured me, that he had found very good effects from *calomel* given in the manner abovementioned, with the *chio turpentine*, in worm-caſes, and all the diſeaſes of children. Thinking that ſmall doſes of *calomel* would be as likely to remove a diſeaſe ſo deeply ſituated ſooner than any other remedy, I had recourſe to this medicine, and gave it in the manner above-deſcribed.

On reflecting, however, on its effects, I found cauſe to ſuſpect, that exhibiting *calomel* in the manner I had done, was uſing it in the moſt uncertain method. Moſt kinds of *turpentine*, I believe, are indigeſtible in the human ſtomach; the more ſolid their conſiſtence, the more difficult they are to be diſſolved in the human body. Great part of the *calomel* might, therefore, be ſo effectually wrapped up in the *chio turpentine*, the hardeſt and moſt indiſſoluble of the whole claſs that are uſed in medicine, that I apprehend a very ſmall proportion of the *calomel* ever came into action. From

this conſideration, I have ſeldom ſince given mercurials made into pills with this ſubſtance, unleſs where I wanted to give the ſmalleſt quantity poſſible; but have generally ordered it to be formed into pills, with ſome ſubſtance that was eaſily diſſolvable; as ſome conſerve or confection. From the ſucceſs attending this caſe, I determined to make trial of a ſimilar proceſs in the *ſciatica*, and the event has generally anſwered my wiſhes. I recollect divers caſes of both ſexes, and different ages, in which a proceſs like the following, has been of ſingular ſervice, after various other medicines and operations, recommended for the cure of this complaint, had been uſed to very little purpoſe.

℞ *Calom. levig. gr.* x.
*Conſ. Roſ. q. ſ. f. pil.* x. *non deaur.*
*Capiat.* j. *omni nocte ſuperbibendo hauſt. ſeq.*
℞ *Aq. Alexit. ſimp.* ℥iſs.
*Alexit. ſpir.* ℥iſs.
*Vin. Antimon. gut.* xxx.
*Tinct. Theb. gut.* xxv.
*Syr. ſimp.* ℥j. *m.*

If

If the pain does not abate by the time this quantity is taken, I increaſe the doſe of *calomel* to two grains one night, one the next, and thus proceed alternately. When the pain abates, the anodyne and antimonial are gradually leſſened; perhaps omitted every other night, or wholly dropped. I have ſeldom met with a genuine *ſciatica* but has yielded to this proceſs in the ſpace of a few weeks, and has as ſeldom returned.

My inducement to make trial of this method at firſt was, that this kind of pains are deep ſeated in the moſt fleſhy parts of the human body, and to which it is extremely difficult to convey the efficacy of any medicine entire, either given internally, or applied without.

That mercurials of all the medicines we are acquainted with, moſt certainly pervade the inmoſt receſſes of the muſcular and tendinous parts, and remove diſeaſes which we know have in them their reſidence.

That, till theſe could take effect, it was neceſſary to mitigate the pain; for all painful diſorders increaſe in proportion to the

irritation attending them. The anodyne, above directed, has other properties than that of an opiate merely. Like as in Dover's famous powder, the anodyne in this compoſition, when duly proportioned, reſtrains the antimonial from exerting its uſual efficacy on the ſtomach and firſt paſſages, and conducts it to the remoteſt parts of the circulation, rendering it an uſeful and efficacious medicine in many painful diſorders.

If the diſeaſe does not yield to the doſe above-mentioned, I gradually increaſe it till ſome little tenderneſs is perceived in the mouth; but I have ſeldom had occaſion to proceed ſo far, or to ſubject the patient to any confinement, unleſs in very rigorous weather. As the violence of the pain may ſafely be mitigated by this kind of anodyne, which is not merely a palliative, I have always thought it better to proceed with the *calomel*, in the manner above-mentioned, as an alterative, than to riſk any thing for the chance only of a few days ſpeedier recovery. Formerly I have had recourſe to the bark, *guaiacum*, the *tere-*

*binthinate*

*binthinate* ſpirits, and other uſual medicines; but ſeldom to the patient's benefit, or my own ſatisfaction. Fontanells, bliſters, cauſtics, likewiſe; but with as little advantage. Of late I have truſted to the proceſs above deſcribed, and have very ſeldom been diſappointed.

Bleeding has not been mentioned, becauſe in moſt of the caſes I have ſeen, it was unneceſſary. Phyſicians are ſeldom conſulted on theſe caſes in the beginning of the diſeaſe. In plethoric habits, this evacuation may be neceſſary as well as purging. Thoſe who ſee the patients early, will be the beſt judges of the neceſſity of theſe evacuations.

## VI. *Obſervations on the* Hydrocephalus internus, *by* W. Watſon, *M. D. F. R. S. Read* 22 Auguſt, 1768.

### *To the* MEDICAL SOCIETY.

*Lincoln's Inn Fields, 22 Auguſt,* 1768.

GENTLEMEN,

PRESUMING that a few obſervations, tending to increaſe our knowledge of a diſeaſe, which ſeems to have been but little attended to by Phyſicians till very lately, would be acceptable to you, I take the liberty of laying the following before you:

I was lately conſulted for a girl of ſix years old, who, as the parents informed me, had, for about ten days, the time ſhe had been brought from the country, been afflicted with great reſtleſſneſs, and a conſiderable degree of fever at times. Her nights had paſſed almoſt without ſleep, and ſhe had continually a pain in the head. She had, during her illneſs, complained of the uneaſy ſenſation occaſioned by light, on which

which account, thoſe about her kept her chamber generally darkened.

Upon enquiring what had preceded this illneſs, I was informed, that the child had been very healthy; that, about nine weeks ago, ſhe had fallen as ſhe was running, and ſtruck her head ſmartly againſt the floor; that, as the bruiſe ſoon diſappeared, this fall was very little thought of, and ſhe was ſent to a boarding-ſchool in the country. In about a fortnight, however, ſhe began to complain much of her head, which complaint continued and increaſed for about ſix weeks. Upon this account, her parents ſent for her home, and the perſon who took care of her as ſhe was bringing to London, frequently obſerved great paleneſs in her face, and convulſive motions in her eyes and eyelids.

For the preſent complaints, ſuppoſing worms to have had a conſiderable ſhare in producing them, her apothecary had given her, at different times, *calomel*, *tartarus emeticus*, and ſaline draughts with nitre, by which her bowels had been kept freely open. A bliſter to the back had been applied,

applied, which had diſcharged well; nevertheleſs, her complaints, particularly the reſtleſſneſs and diſorder in the head, were not relieved, but grew daily worſe.

In this ſtate I firſt ſaw her. She had no fever. Her pulſe was feeble, irregular, and beat about eighty-four ſtrokes in a minute. Her eyes looked very heavy, the pupils were conſiderably dilated, and ſhe was perpetually, when not in a ſtate of ſtupor, crying out, *Oh, my head!* She had frequent ſick fits, and brought up, at times, both the food and medicines which were given her.

Bliſters to various parts, and medicines of different kinds, which were directed for her, availed little. The before-mentioned ſymptoms increaſed; ſhe became quite blind; her pulſe quickened to a very great degree; ſhe was convulſed, and died on the ſixth day after my firſt ſeeing her.

As from my firſt viſiting this child, I ſuſpected the diſeaſe to be the *hydrocephalus internus*, at my requeſt the head was opened by Mr. Hewſon. We found, in the cavities of the brain, between four and five ounces of a perfectly clear and ſcentleſs fluid,

fluid, the greateſt part of which was contained in the ventricles. The brain was otherwiſe in a natural ſtate. There was no fluid between the ſkull and the membranes, between the membranes themſelves, or between theſe and the brain; but there was water in all the cavities, and not leſs than half an ounce in the fourth. This muſt be regarded as a conſiderable quantity, as, in a ſound ſtate, there is ſeldom found more than as many tea-ſpoonfuls in the whole four cavities.

In young children, labouring under a *hydrocephalus*, before the bones of the head are well formed, or the ſutures cloſed, a much greater quantity of fluid than that here mentioned is frequently obſerved. Then indeed, it is moſt generally found on the outſide of the brain. But when the bones of the *cranium* are complete, and the ſutures well cloſed, as they were in the child who is the ſubject of this inquiry, more than four ounces in the cavities muſt be conſidered as a great ſurcharge. That portion of the brain which is inſerted between the ventricles, and called by anato-

miſts *ſeptum lucidum*, was much thickened, and perfectly opake.

The late Dr. Whytt, not long ſince, publiſhed ſome valuable obſervations *on the dropſy of the brain*. According to the caſes therein mentioned, which he himſelf had ſeen and diligently attended to, it ſhould ſeem, that I firſt ſaw the child, the ſubject of this paper, at the end of what he calls the ſecond ſtage of the diſeaſe. Dr. Whytt obſerves, beſides other ſymptoms, that there is a conſiderable degree of feveriſh heat, with an increaſed pulſe, in the firſt ſtage of it. In the ſecond, though the fever is abated, the head is not relieved; but the pulſe is irregular, and much reduced in its number of vibrations in a given time. In the third ſtage, that the pulſe riſes again to a feveriſh quickneſs; and that this change is obſerved five, ſix, or ſeven days before death. This correſponds with what I obſerved in this child. I ſaw her firſt ſeven days before her death. Her pulſe beat then 84 ſtrokes only in a minute. The next day, though ſhe had ſlept all night, her pulſe was riſen to 108, and continued not leſs, though frequently more, until they

they were too quick, and at the ſame time, too irregular, to be numbered with any degree of preciſion. Convulſions, a locked jaw, and death, ſoon put an end to her ſufferings.

I do not take upon me to determine what ſhare the ſtriking her head againſt the floor, by the fall above-mentioned, had in creating this diſeaſe, and in occaſioning the great extravaſation of fluid in the ventricles and cavities of the brain, which was too much to be taken up by the abſorbent veſſels, and produced a diſeaſe of too conſiderable a magnitude to admit of relief by any medical proceſs that I am acquainted with.

Since the caſe before-mentioned, I have ſeen two others affected in the ſame manner. One of them was a girl of nine years old; the other, a girl of fourteen. The former, after having laboured under a fever of a very uncertain type, during the continuance of which ſhe complained greatly of her head, became comatoſe, in which ſtate I firſt ſaw her. She was

reſtleſs, coſtive, had often ſick fits, and vomited frequently. In general, her countenance was pale, but fluſhed remarkably at times. She ſcarce knew the byſtanders, and ſeldom anſwered pertinently the queſtions propoſed to her. After a conſiderable time, not being able to bear the light, her ſight became very imperfect: her pupils were conſiderably dilated, and her eyes and eyelids frequently convulſed. Though the heat of her fleſh was temperate, the pulſe was quick and irregular. Theſe ſymptoms increaſed, and ſhe died convulſed. Her head was not permitted to be opened.

The other girl was almoſt in every reſpect ſimilar to this laſt, except that after the feveriſh heat was over, though both pupils were dilated, and at times ſhe could not diſtinguiſh objects, her left eye only was affected by a *ſtrabiſmus*, and the muſcles of the right cheek and eyelid convulſed. She died, after having been comatoſe ſeveral days. After death her head was opened. A ſmall quantity of coagulated blood was found between the ſkull and *dura mater*. The left ventricle of the brain

brain was in its natural ſtate; but, upon carefully opening the right, it was found to contain more than three ounces of a clear fluid.

Neither of the two laſt-mentioned young perſons had any fall, or received any blow, which could in the leaſt ſeem to contribute to the formation of this diſtemper.

The dropſy of the brain is a moſt dangerous diſeaſe. Not only the three caſes above-mentioned, but ſeveral others that have fallen under my notice, have all been fatal; nor has better ſucceſs attended other phyſicians, both here and elſewhere. The late eminent Dr. Whytt, out of about twenty patients who had fallen under his obſervation, freely owns, that he had never been ſo fortunate as to cure one who had thoſe ſymptoms, which will certainly denote this diſeaſe: and he ſuſpects, that thoſe who imagine they have been more ſucceſsful, have miſtaken another diſtemper for this. Early in the diſeaſe, the ſymptoms are ſuch as render it difficult to the phyſician to diſtinguiſh it from thoſe diſorders

which owe their riſe to worms or foul bowels. In the advanced ſtate of it indeed, the diagnoſtics are more certain: if, therefore, after a fever of an anomalous kind, attended with remarkable impatience of light and great reſtleſſneſs, in which the ſtomach is affected with ſick fits, and the head with unremitting pains, together with a ſenſation of tightneſs or fulneſs in the upper part of it, the patient becomes comatoſe, with conſiderably dilated pupils, and convulſive motions of the cheeks, eyes, and eyelids; if to theſe are added a frequent rolling of the head from ſide to ſide, little doubt remains of the diſeaſe being a dropſy in the brain. To this perſons under the age of puberty * are more liable, than thoſe who have paſſed that period.

* Though this diſeaſe is moſt frequently obſerved in children, and in perſons under the age of puberty, it is ſometimes ſeen in adults. Above twenty-five years ago, I attended the diſſection of a ſtrong healthy man of thirty, who, after having continued ſeveral days in a lethargic ſtupor, died convulſed. Upon opening the head, the ventricles and cavities of the brain were found diſtended, with a large quantity of colourleſs fluid. This, by thoſe who attended him, was, at that time, conſidered as merely accidental, and an attendant upon his diſeaſe, and by no means as the ſource of it.

Expectations of relief from the medical art, ſhould be indulged only when the cavities of the brain have their fluid increaſed within a certain degree. Under theſe circumſtances, ſtimulating purges, directed in ſuch a manner as not to reduce the patient's ſtrength too much; diuretics, bliſters, and ſuch remedies, whoſe property is to carry off extravaſate fluids in dropſies of other parts, promiſe faireſt to be of uſe. On the contrary, when the contained fluid is in quantity ſufficient to diſtend the cavities of the brain beyond a certain point, the operation of the abſorbent veſſels is impeded, or, perhaps, totally obſtructed, and the cure is hopeleſs. However certain we may be of the cavities of the brain being loaded with an extravaſate fluid, and conſequently, of our knowledge of the diſeaſe, we muſt be content to reſign the patient; as any operation to relieve him, by drawing off the water, cannot but be fatal. Even in the *hydrocephalus externus*, and *ſpina biſida*, in which diſeaſes the diſtending fluid is more eaſily come at, than in that of which we are now treating, whenever,

through ignorance or deſign, the integuments have been divided, and the contained fluid evacuated, life has continued but for a ſhort time after the operation.

VII. *A Caſe of the* Locked Jaw, *and* Opiſthotonos; *to which are added ſome Remarks on the Uſe of the* Cicuta, *by* William Farr, *M. D. Phyſician to the Royal Hoſpital at* Plymouth. *Communicated by* William Watſon, *M. D. F. R. S. Read* 17 October, 1768.

ALTHOUGH *opium* has been recommended in the firſt and ſucceeding volumes of the *Medical Obſervations and Inquiries*, for the cure of the *locked jaw* and *opiſthotonos*; yet, as many who have not had an opportunity of making trial of it in this diſeaſe, may be fearful of giving it in ſuch very large doſes as are neceſſary, until, by repeated obſervations, the ſafety of the practice becomes more and more aſcertained; I have ſelected the following, out of four caſes that were under my care; in the two firſt of which, I have now ſome reaſon to think, the patients might have been ſaved, but from too great timidity in this reſpect.

*Thomas Middleton*, marine, aged 26, of a thin habit and healthy conſtitution, having been

was ſenſible of their coming on, from a pain he felt ſtriking up from his left groin to his neck; but, on examining the part, nothing particular could be ſeen or felt, nor did he recollect that he had received any hurt there. His pulſe was quickened conſiderably during the ſpaſm; but at other times tolerably regular.

It is remarkable, that the *ſpaſmus cynicus* had, in this ſhort ſpace of time, ſo deeply impreſſed the marks of age upon his face, even when free from the paroxyſm, that when, in anſwer to the queſtions I put to him, he repeatedly aſſured me, that he was not more than 26 years of age, I concluded that the diſorder muſt have affected his ſenſes; the byeſtanders, as well as myſelf, judging him to be at leaſt ſixty.

His cough was now very troubleſome; he ſpit up, with much difficulty, a conſiderable quantity of diſcoloured fœtid matter, and his breath was moſt intolerably offenſive.

As he had been coſtive ſince taking the purgative above-mentioned, I ordered him a gentle laxative, which brought away a quantity of hardened excrement. Emol-

lient

lient fomentations were applied to the *abdomen*, and he was directed to take, once in four hours, a draught made up with *ſperma ceti*, *ſal. corn. cerv.* and *tinct. thebaic. gut.* x.; for his common drink, a pectoral decoction with broth, panada, and gruels, whenever they could be got in.

June 7. He was this morning put into the warm bath, the ſame medicines continued, and his complaints remained nearly the ſame as yeſterday.

June 8. The violence of the ſpaſms was now much greater; his *abdomen* was ſo much contracted, as to be as incompreſſible as a deal-board; his jaw was more cloſed, and the lower extremities, during the ſpaſm, as rigid and inflexible as an iron-bar. He was frequently ſeized with cold, clammy ſweats, and was better in no reſpect than that he had rather more reſt laſt night than the preceding.

I now found it neceſſary to have immediate recourſe to larger doſes of *opium*; and therefore ordered a grain of *opium* with *confect. cardiac. gr.* v. to be given every hour, beſides an emulſion made with *ſper-*

*ma ceti, oxymel ſcillitic.* and *elixir paregoric.* of which he was to take two ſpoonfuls occaſionally, when his cough was troubleſome. The warm bath was likewiſe repeated.

June 9. He began with the opiate pill yeſterday at 3 *p. m.* and, at noon this day, had taken 14 grains of *opium*; is now eaſier in every reſpect, can open his mouth wider, and bend his knees a little, though on the firſt attempt it always brings on the *ſpaſmus cynicus*; the tenſion and hardneſs of the *abdomen* are ſtill very great; the cold ſweats, which he had yeſterday, have left him, and are ſucceeded by a warm glow over his whole body.

As he had had no ſtool the two preceding days, an emollient clyſter was directed, the opiate pill once in two hours, and the emulſion and warm bath as before.

June 10. The clyſter was not diſcharged till twelve laſt night, when it brought off a large quantity of brown fœces. He was much refreſhed after having been in the warm bath, and was able to get out of the bath with leſs aſſiſtance than before; has had

had no violent ſpaſmodic paroxyſm ſince. There is a conſiderable ſtiffneſs on the *muſculi maſtoidæi*, and his jaw remains much in the ſame ſituation as yeſterday, viz. open enough to receive the tip of one's little finger. His pulſe is fuller, and tolerably regular; his ſweats are pretty conſiderable, but neither cold nor clammy; his *abdomen* remains equally tenſe, his cough very troubleſome, and he ſpits up a great quantity of purulent matter. He has taken 12 grains of *opium* ſince yeſterday noon. His medicines and the warm bath were ordered to be repeated as before.

June 11. He had a ſtoppage in making water laſt night about nine o'clock, when his jaw became more locked: both theſe ſymptoms, however, went off ſoon, and he reſted very well the remainder of the night. His pulſe is now quite diſtinct and firm; the tenſion on the *abdomen* leſſened; he is able to ſit up in bed; can move his knees without pain, and eats broth and panada very heartily.

His cough continues ſtill very troubleſome; but he expectorates, with greater eaſe,

eaſe, a large quantity of very fœtid, diſcoloured, purulent matter.

Having had no ſtool ſince the 9th at night, a laxative potion was ordered, and the warm bath, opiate, and emulſion, as before. He has taken 12 grains of *opium* ſince yeſterday noon.

June 12. I found him this day much worſe; his head conſiderably retracted, the muſcles of the neck extremely rigid, as well as thoſe of the *abdomen:* his pulſe, however, continued regular, and his appetite good. A miliary eruption began to appear on the breaſt and *abdomen.*

Having had no ſtool from the laxative potion, a purging clyſter was ordered, which had the deſired effect. The warm bath and medicines, as before; except that the opiate pill was ordered every hour till 3. *p. m.* when he was directed to take 3 grains of *opium,* and after that, *gr.* j. every two hours. He had taken 12 grains ſince yeſterday.

June 13. As he ſlept ſeveral hours in the night, has taken no more than 13 grains of *opium.* His pulſe is fuller and quicker; he

he can open his mouth rather wider; the rigidity of the muſcles of the neck is leſs, and the head not ſo much retracted; but upon any ſudden motion, is ſtill ſeized with a return of the ſpaſms, and the tenſion on the *abdomen* is very great. His cough is eaſier, expectoration freer, and the miliary eruption much increaſed on his breaſt.

Having formerly made trial of muſk, together with opiates, in two caſes of the locked jaw, at the royal hoſpital at Haſlar near Portſmouth, without experiencing any good effects from it, or indeed any, except that it ſeemed to occaſion a remarkably full pulſe; and deſirous of ſeeing whether the addition of other antiſpaſmodic medicines might expedite the cure; and how far the benefit already received might fairly be attributed to the *opium*; in its room, I ordered the following bolus to be given once every three hours:

℞ *Camphor. (c. Mucilag. G. Arab. q. ſ. trit.) gr.* v.
*Aſſ. fœtid. gr.* iij.
*Confect. Cardiac. q. ſ. m. f. Bolus.*

Three grains of *opium* were, however, ordered to be given him in the evening, and the warm bath continued, as before.

June 14. I found him this day conſiderably worſe, and much diſpirited. He took four of the boluſes and 3 grains of *opium* at night. About four in the morning he complained of great griping, and increaſed tenſion on the *abdomen*; upon which no more were given him. The miliary eruption has almoſt diſappeared. He having had no ſtool ſince the 12th, a clyſter was directed, and, inſtead of the warm bath, anodyne fomentations to be applied to the *abdomen* ſeveral times a-day. A grain of *opium* every hour, and gr. iij. in the evening.

June 15. He has taken 20 grains of *opium* ſince yeſterday noon; finds himſelf much eaſier; the miliary eruption appears thick again all over his body; there is ſtill a great tenſion on the *abdomen*, but finds eaſe from the fomentations. Whenever the ſpaſms admit, he lies with his knees quite bent; and as ſoon as he attempts to ſtretch them out, a violent rigidity of

the lower extremities enſues. His cough is much the ſame, and he continues to ſpit up a conſiderable quantity of purulent matter; but not ſo black nor diſcoloured as before.

Medicines, &c. the ſame as yeſterday.

June 16. He has taken 26 grains of *opium* ſince yeſterday noon, is in good ſpirits, and better in all reſpects than he has been ſince the firſt attack: can open his mouth much wider; had a large natural ſtool this morning, and was able to lift himſelf upon the bedpan without aſſiſtance; has a good appetite, his pulſe diſtinct and firm. One grain of *opium* was ordered to be given every two hours, and 3 grains at bedtime.

June 17, 18. He has taken each day 15 grains of *opium*: tenſion on the *abdomen* much leſs. The greateſt rigidity at preſent is on the muſcles on the back of the neck: in caſe he attempts to bend his head forwards, a ſpaſm commonly comes on. His expectoration is very free, and he ſpits up much purulent fœtid matter ſtreaked

with blood. Beſides the medicines before preſcribed, he was directed to take occaſionally, four ſpoonfuls of a *Julep. è Camphora c. Acet. ppt.*

June 19, 20, 21. He has taken each day 14 grains of *opium.* As his complaints are always worſe whenever he is coſtive, he has been kept open by means of clyſters. His pulſe has been quite regular for many days paſt: his appetite is good; but he is yet ſo weak as to be barely able to ſtand alone. He complains ſtill of much pain round his neck and ſhoulders, which were ordered to be rubbed with the following liniment:

℞ *Camphor.* ℥j.
*Ol. olivar.* ℥ij. *f. Solutio.*

The other medicines to be continued as above.

June 22, 23. He has taken each day 14 grains of *opium*, was able to walk a little yeſterday afternoon for the firſt time. There ſtill remains a conſiderable rigidity on the muſcles of the neck and *abdomen:* as he is rather coſtive, although a ſtool has been

been procured every day by means of a clyſter, a lenitive potion was directed, which moved him four or five times, and relieved him greatly.

June 24, 25. He has taken 14 grains of *opium* each day; is able to walk much better; complains of great pain on the right ſide under the lower ribs. *Repet. potio lenitiva mane; cætera medicamenta, ut antea.*

June 26. He had five or ſix ſtools this day, which relieved him of the pain; and is better in every reſpect.

June 27. He has taken this and the preceding day 28 grains of *opium*; can walk much better; tenſion on the *abdomen* and rigidity of the muſcles of the neck conſiderably leſs; his cough, on the whole, much better, though he ſtill ſpits up a good deal of purulent matter. Has all along felt at times the pain he complained of at firſt in his right groin. The part was directed to be rubbed with the camphorated oil. A ſwelling appearing above the ſpine of the *ilium* on the ſame ſide, the follow-

ing plaſter, after the part had been well embrocated, was ordered to be applied.

℞ *Empl. è Cymin.* ℥ij.
*Camphor. (ol. olivar. q. ſ. ſolut.)* ℥ſs.
*m. f. emplaſtr.*

June 28, 29, 30. He continues better; has taken this and the two preceding days 36 grains of *opium.* The quantity of *opium* was now leſſened to one grain three times a-day, and 3 grains, *h. ſ.* The emulſion, with the *oxymel ſcillit.* &c. as before.

July 1, 2, 3, 4, 5, 6. He has taken every day 6 grains of *opium:* what he ſpits up is of a better colour, and leſs in quantity; walks much better, and gains fleſh. As there was not after this time any return, of the locked jaw or *opiſthotonos*, it is ſufficient to obſerve, that, on not finding him ſo well on the omiſſion of the opiate, I thought it right to continue it till the 21ſt, having, for the laſt two or three days, given only 3 grains *hora ſomni.*

It is remarkable, that although, in the ſpace of three weeks, this man had taken more

more than five drachms of *opium*, which amounted, at a medium, to 14 grains a day; yet it never produced the leaſt ſtupor, nor was his head at all affected through the whole of the diſeaſe, or his expectoration obſtructed; but the reverſe: and although the above was more than I have ever known given in the ſame ſpace of time, yet I had no reaſon to think but that the quantity might have been ſtill increaſed with ſafety, and the cure, perhaps, thereby conſiderably expedited. In theſe caſes, as Dr. Chalmers has obſerved, the quantity of *opium* neceſſary to be given, cannot by any means be defined; but muſt be proportioned to the violence of the ſpaſms, and the effects produced by the medicine.

Although this patient had no return of the *opiſthotonos*, yet, on account of other ailments, he did not recover his health ſo as to be fit for duty till the middle of September. Of theſe it is ſufficient to ſay in general, that the cough and ſpitting were relieved by *G. ammoniac*, ſquills and opiates: For great weakneſs in the ſtomach and bowels, accompanied with much flatulence

and diſtention, were ordered the *Pilul. gummoſ. ph. l.* to which were added ſoap, rhubarb, and *tartar. vitriolat.*; and externally, *theriac. andromach. c. ol. mac.*; and, towards the cloſe, the *cortex peruvianus*, with *valerian*, completed his cure. The complaint which proved as obſtinate as any, was the ſwelling above the ſpine of the *ilium*; and which, after a variety of applications, was at length diſcuſſed by frequently fomenting the part with ſtrong decoctions of the *cicuta*, and afterwards applying the *Empl. è cicuta c. ammoniaco pharm. Edinburg.*

Having had occaſion to mention this inſtance of the efficacy of the *cicuta* externally applied as a diſcutient, I ſhall here ſubjoin a brief account of ſuch effects as I have obſerved from its internal uſe in a variety of complaints. As a proof of its diſcutient, attenuating and reſolving powers, I have ſelected the following caſe, as moſt remarkable, from ſome others, in which its good effects were likewiſe manifeſt.

Darby Ryan, marine, was received into this hoſpital, March 26th, 1767, much emaciated, and in a very weak condition, labouring under a ſevere cough, *aſcites*, *anaſarca*, and *Tertian* ague. He was put under a courſe of *ſaponaceous deobſtruent* medicines, with *cathartics* interpoſed, as his ſtrength would bear. The *aſcites* notwithſtanding increaſing, ſo as to render reſpiration extremely laborious, it was neceſſary to have recourſe to tapping. Some gallons of water were drawn off; after which a hard tumor on the region both of the liver and ſpleen was manifeſt.

He was now ſo much reduced, as to derive his chief ſupport from wine and other cordials; and, in ſpite of medicine, the *aſcites* increaſed to that degree, as to render the operation again neceſſary in leſs than two months, when a large quantity of water was a ſecond time drawn off.

The urinary ſecretions, however, being now more free than before, corroborants, joined with anodynes occaſionally, had a happier effect than could well have been expected, in preventing the return of his hydropic

hydropic complaints: his cough too grew much better; the expectoration continued free, well digeſted, and leſs in quantity, until at length he was wholly freed of this complaint.

But the ague ſtill continued to haraſs him: in ſuch an obſtructed ſtate of the *viſcera*, and with the ſwellings before-mentioned becoming more enlarged and painful, I did not think it ſafe to adminiſter the bark; but every other medicine, celebrated for the cure of intermittents, was tried, and tried in vain; not but that intervals were obtained ſometimes for a fortnight or more, when the fits would return with redoubled force, and at once deprive him of the little ſtrength he had gained.

Matters being in this ſituation, and deſpairing of a cure, unleſs the *abdominal* obſtructions could be, in ſome meaſure, reſolved, I was inclined to make trial of the *cicuta* for this purpoſe.

The belly was ordered to be frequently fomented with ſtrong decoctions of the plant, after which *emplaſtra e cicuta cum ammoniac.*

*ammoniac.* were applied; and *extract. cicutæ* ℈j. (afterwards increaſed to ʒſs.) was given twice a-day. The benefit he received in leſs than three weeks from this courſe was ſuch, as to encourage me to perſiſt in it. From that time he had no more return of his ague; the ſwellings became gradually leſs, and the pain, which had been conſiderable, (particularly on the right ſide) much abated: theſe good appearances continued without any untoward ſymptom intervening, till, in about three months, the tumor on the region of the liver being wholly gone, and that on the left ſide (or *ague cake*, as it is ſometimes called) being ſo ſlight, and attended with ſo little pain, as not to prevent him doing his duty, he was diſcharged, March 28, 1768, quite recruited as to his ſtrength and fleſh, and perfectly freed in all reſpects, ſave that above-mentioned, from the very threatening and complicated complaints under which he had ſo long laboured. On meeting this man a few days ſince, viz. February 1769, and enquiring into the ſtate of his health, he told me, that the ſwelling remained

mained nearly the ſame, and that he once or twice had had a return of his ague; for which, however, he took no medicine; that he had ſuffered no other interruption in his health, except when he had been more than ordinarily expoſed or fatigued in the courſe of duty: he appeared at that time well and hearty.

Of the efficacy of *hemlock* in diſſolving ſcrofulous tumors, I have had many inſtances; but as I never had occaſion to try it in this diſorder, except on hoſpital patients, I had not an opportunity of being informed how far the cure proved radical. The only obſervation worthy of remark on this article is, that the *cicuta* ſometimes proves efficacious here in ſmaller doſes, than in any other diſorder, in which I have made trial of it. I have known pretty large glandular ſwellings diſperſed in a fortnight, by taking no more than 10 grains a-day of the extract.

With regard to its good effects in cancers, it would be taking up room to no purpoſe in your very uſeful collection, to give particular hiſtories, ſince the reſult altogether

correſponds

correſponds with what has been already obſerved by Dr. Fothergill, Dr. Rutty, and others. I have never met with a ſingle inſtance of an ulcerated cancer being cured by the *cicuta*, although many have given it long and fair trials; nor, on the other hand, have I ſeen one caſe in which it did not produce temporary good, and in ſome uncommonly flattering effects.

VIII. *A* Hemiplegia, *attended with uncommon circumſtances, communicated by a Member of the Society. Read* October 31, 1768.

ON the 27th of February, 1762, M. M. in the 68th year of her age, was ſeized with a palſy, which entirely deprived her of the uſe of her right ſide, and of her ſpeech. At the firſt attack ſhe was inſenſible, and then ſhe had all the aſſiſtance that an able phyſician could give her; but as ſoon as ſhe recovered her ſenſes, all his preſcriptions were in vain; ſhe perſevered with obſtinacy to refuſe taking any medicine, or to ſuffer any outward application. All the time of her helpleſs condition, ſhe was conſtantly attended by two nurſes in the night, and generally by two likewiſe in the day-time, beſides her relations, who would frequently ſit by her, both to comfort and to amuſe her. She lived till the 5th of October, 1767.

From a little time after ſhe was ſeized with the palſy, till about five weeks before ſhe

ſhe died, ſhe eat meat, (more heartily and more greedily indeed, than in her former ſtate of good health) and by choice, rather the high-ſeaſoned diſhes, both for dinner and ſupper; but drank ſparingly. All this time ſhe was never ſick at her ſtomach, and ſhe never ſweated. Her urine was moderate in quantity; but neither its quantity nor quality could be aſcertained, as it came always from her upon clothes. She had frequently moſt excruciating pains in the urinary paſſages, which were ſuppoſed to be from gravel, and ſhe paſſed many ſmall round ſtones like ſhot. She had a conſtant ſpitting, or drivelling of *ſaliva*. She was coſtive from the beginning of her illneſs: and this complaint increaſed to ſuch a degree, that in a little time, ſhe ſeldom had a ſtool in leſs than a week; more frequently it was a fortnight, ſometimes three weeks, and ſometimes four, and twice together only once in thirty days; that is, *twice in two months, while ſhe was eating heartily all the time, and had no ſenſible excretion beſides; except the uſual quantity of urine, and the ſalival diſcharge*

*diſcharge above-mentioned.* And both times, the evacuation probably would have been ſtill later, if 4 or 5 grains of *jalap* had not been daily taken (without her knowledge) in the beer that ſhe drank, from the time that ſhe had been a fortnight without a ſtool. After this the coſtiveneſs continued, though not to ſuch a degree, while ſhe lived, except once, that ſhe was taken for a ſhort time with a violent purging, which threatened her immediate diſſolution.

During the laſt four or five weeks of her life, her appetite to food declined gradually. In the laſt eleven days ſhe ſwallowed neither food nor drink of any kind whatever. On the twelfth day ſhe had been prevailed upon to try if ſhe could take a ſip of her favourite liquor, ſmall beer, with a little wine in it. Whether ſhe got any down or not, in two different attempts, was uncertain; but it could not have been more than a tea-ſpoonful each time. On the thirteenth day before her death, ſhe had taken one diſh of chocolate, which we may preſume, was the laſt nouriſhment ſhe took.

During

During theſe laſt twelve days, ſhe was perfectly in her ſenſes, (till within a few hours of her death) and never expreſſed the leaſt degree of hunger or thirſt. She made rather leſs urine than before. Her ſtrength ſunk, or failed, in the moſt gradual way that could be conceived; and her breath and her diſcharges became ſo offenſive before death, that though great care was taken, the room could not be kept tolerably ſweet.

She was much extenuated in the courſe of her diſeaſe; and, at one time, it was with great difficulty that a mortification, from preſſure in the region of the *os ſacrum*, was prevented.

This account was drawn up by a relation of the patient, who, from his ſituation, could not be impoſed upon with regard to any of the facts above mentioned; and it is communicated for the ſake of thoſe facts only.

IX. *Of the Uſe of Tapping early in Dropſies, by* John Fothergill, *M. D. F. R. S. Read* 14 November, 1768.

THERE are ſeveral efficacious remedies in the hands of phyſicians, which are often made uſe of ſo late in the diſeaſe, that they fall into diſgrace, from being applied when nothing could ſave the patient from inevitable deſtruction. Of this kind, perhaps, are bliſters applied to the head. The ſick and the byeſtanders have conſented to this application, when nothing could be of uſe. The patient dies, and the bliſter to the head bears the blame, both as an ill omen from the phyſician, and as a barbarous application, when, in fact, it deſerves the imputation of neither. The phyſician well knowing the general prejudice againſt the application of bliſters to the head, ſhifts off the propoſal longer than is right in his own judgment, through fear leſt the terror excited by ſuch a preſcription, ſhould do as much harm as the bliſter could do good. As the danger increaſes, this very bliſter is then often called

called for by the patient's friends, when neither this nor any thing elſe can avail.

With what difficulty can we perſuade thoſe who are on the verge of a conſumption, and the hectic ſymptoms, juſt in their infancy, to leave towns for a purer air, or ſeek the aid of Briſtol waters on the ſpot, while ſuch kind of remedies afford almoſt a certain cure. When the lungs are inflamed and ulcerated, an incurable hectic, with all its waſting conſequences, are far advanced; then, whether the phyſician thinks any benefit can be received or not, they fly to Briſtol, when neither the water nor any other means can prevent their diſſolution.

Perhaps the operation of tapping may have undergone the ſame fate. Few dropſical patients can bear the name without apprehenſions of terror; and indeed not without reaſon: for, of the many who undergo this operation, how few are ſurviving inſtances of its advantage?

I think there is reaſon to ſuſpect, that tapping has incurred ſome part of its diſgrace, from its being delayed till it

could have no other effect than procuring a very ſhort-lived hope to the patient, at the certain expence of the ſmall ſhare of ſtrength remaining.

I have endeavoured to prevail upon ſuch patients labouring under this diſeaſe as have requeſted my aſſiſtance, to ſubmit to it as early as poſſible, after I found that the quantity of water was ſuch as could not be removed by medicines, without doing great violence to the conſtitution. There are ſeveral perſons now living, whom I prevailed on early to ſubmit to this operation. When I found the uſual diuretics had no effect, and the more active purgatives did as much prejudice by weakening the whole frame, bringing on thirſt, loſs of appetite, debility, and fever, as they did ſervice by the evacuation they produced; I deſiſted from medicine, allowed them to drink as much as thirſt required; and, when the fluctuation was ſo evident as to render the operation ſafe, it was performed. In one caſe, one operation alone ſucceeded: for, by diuretics and corroborants, proper diet and ſuitable exerciſe, the urine paſſed the

the kidneys freely, and the patient recovered perfectly. This was an evident *aſcites*, and came on ſoon after a lying-in; apparently from the power of abſorption being weakened beyond a ſpeedy recovery, and the exhalant veſſels being relaxed immoderately; the balance was deſtroyed and a vaſt quantity of water was collected in a ſhorter time than I ever ſaw. All the *viſcera* ſeemed to be ſound, and none of the uſual cauſes of dropſies from intemperance had preceded. Had we perſevered with ſtrong purgatives or diuretics much longer, the tone of the abſorbent veſſels would perhaps have been ſo far weakened, as to have rendered tapping, or any other means ineffectual.

Another caſe was, in a ſingle woman of about thirty-five years of age; the diſeaſe ſucceeded a tedious lingering fever, attended with great thirſt; and very large quantities of thin liquors had been poured down, without diſcretion.

Apprehending the diſtemper proceeded from the diminiſhed power of the abſorbing veſſels, the redundancy of fluid, the general

debility of the whole frame; very few medicines, except cordials, were given, till ſhe was full enough to be tapped. This was happily performed; but ſhe ſoon filled again. The operation was repeated. The medicines ordered for her now began to take effect. The urine was increaſed, her ſtrength returned, and ſhe left the town perfectly recovered.

If we conſider, that this operation is far from being one of the moſt painful, and that, if the fluctuation is ſufficiently evident, and the belly moderately tenſe, it is one of the ſafeſt, it ſeems to me, that we have nothing to fear, either in reſpect to ourſelves or our patients, if we recommend it as early as poſſible.

If I am called to a patient tending to a dropſy, the belly beginning to fill, the urine paſſing in ſmall quantities, and high-coloured, the appetite failing and thirſt increaſing, with the loſs of fleſh in the upper parts of the body; I have recourſe to ſuch diuretics, purgatives, and corroborants intermixed, as the ſtate of the caſe and the nature of its cauſes indicate. The

prepa-

preparations of ſquills, the neutral and alkaline ſalts, the *terebinthinate* balſams, afford many efficacious compoſitions. The purgatives are known to every one. If, by a reaſonable perſeverance in this courſe, no conſiderable benefit accrues; if the *viſcera* do not evidently appear to be obſtructed and unfit for the future purpoſes of life; if the complaints have not been brought on by a long habitual train of intemperance, and from which there ſeems little hope of reclaiming the patient; if the ſtrength and time of life are not altogether againſt us; I deſiſt from medicine, except of the cordial reſtorative kind; and let the diſeaſe proceed till the operation becomes ſafely practicable: when this is done, by the moderate uſe of the warmer diuretics, chalybeates and bitters, alſo the preparations of ſquills in doſes below that point at which the ſtomach would be affected, I endeavour to prevent them from filling again.

If we recollect what happens in the cure of ſeveral incyſted dropſies, we ſhall find the opinion here advanced confirmed. Divers of theſe are cured by puncture;

ſometimes once only; ſometimes the operation is neceſſarily repeated. You will remember many caſes, I doubt not, of the dropſies of the *teſtis* or *tunica vaginalis* particularly. I can recollect ſeveral within my own knowlege; ſome that have required but once tapping, others repeatedly, and yet at laſt have remained perfectly cured.

Should you, gentlemen, be of opinion, that theſe remarks are not ill founded, I have no doubt but, from the ſhare of buſineſs which paſſes through your hands, the public will receive ſuch confirmations as may tend to diſſipate that dread of tapping, which, I am ſatisfied, is one great cauſe of the diſgrace under which it labours, and is alike injurious to our art, and detrimental to the patient.

Before I quit this ſubject, permit me to mention a method of ſcarification that has often ſucceeded in anaſarcous ſwellings of the legs and thighs; at leaſt, it has ſo far ſucceeded, as to draw off large quantities of water, without either ſo much pain or danger as in the common way by inciſions.

Theſe

Theſe are always painful, and, if large, are dangerous, from the known difficulty of healing wounds in anaſarcous habits.

I generally order this operation to be performed with the common ſcarificator uſed in cupping, and the inſtrument to be placed ſo as to make the wounds tranſverſely. If the ſkin is thick, the lancets may be ſet ſo as to make deeper, and conſequently wider inciſions. By this method, a large quantity of water will often drain from the legs and thighs, without riſk of inflammation, or deterring the patient from a repetition, if neceſſary. To proceed with as much ſafety as poſſible, I commonly order the inſtrument firſt to be applied about the middle of the calf on each ſide the leg, and either to one leg only, or to both, as occaſion requires. The application of glaſſes, either to raiſe the ſkin, or promote the diſcharge afterwards, is unneceſſary. The inſtrument is gently preſſed upon the ſkin till a ſurface is formed ſufficiently flat to admit the lancets in the ſcarificator to take effect equally. By making theſe little openings

openings in the ſkin tranſverſely, they give vent more freely to the fluid, and are longer before they unite.

Should it be aſked, in what caſes this application is proper; it is anſwered, that in all anaſarcous habits, where the *ſeróſa colluvies* gains upon us faſt, and the ſkin is ſo ſtretched as to threaten a rupture, or inflammation and gangrene, much miſchief may be prevented by theſe means. Likewiſe, where the breath is extremely affected in ſuch habits, a temporary relief may, in this manner, often be obtained, in order to give a fair chance to remedies adminiſtered internally. Your own experience, Gentlemen, will ſuggeſt to you many other uſes of this operation.

## X. *On painful Conſtipation from indurated* Fœces. *Read* 14 November, 1768.

### *To the* MEDICAL SOCIETY.

GENTLEMEN,

Permit me to plead the privilege offered in the Preface to your Firſt Volume, of remaining, if a writer pleaſes, concealed.

Your ſecretary is informed to whom he may apply, if any of the facts are diſputed. I am, &c.

I KNOW not of any writer who has given himſelf the trouble to acquaint young practitioners with a complaint that frequently occurs, is very troubleſome, may eaſily be miſtaken, and the miſtake be productive of very ſerious comſequences to the ſufferer.

You who practiſe in the metropolis, by daily conference with one another, learn many things caſually, as if it were, of much importance to yourſelves and to others, that

that make their way more ſlowly to the country.

It is known, that from many cauſes, from the uſe of the bark eſpecially, it happens, ſuch quantities of hardened *fæces* are ſometimes collected in the *rectum*, as nature, without aſſiſtance, is unable to expel. Many ſuch inſtances have occurred to me in the courſe of a moderate ſhare of buſineſs; and I doubt not, many more to you, gentlemen, who ſeem to take the lead ſo happily in practice, as well as in a diſpoſition to communicate the reſult of your extenſive experience.

I ſhall relate one ſingle caſe particularly, as ſome uſeful hints may be collected from it, as well as from ſome other caſes of the like tendency, ſufficient, I hope, to lead the young practitioner into a method of diſtinguiſhing this diſorder from others, which, though in ſome appearances the ſame, are diametrically oppoſite.

Not long ſince I was deſired to viſit an elderly gentleman, labouring, as it was ſuppoſed, under an obſtinate *diarrhœa*. He was in the country, under the care of a very

very ſenſible and experienced apothecary, who, from the patient's and attendants complaints and informations, was induced to believe it a *diarrhœa*, and had treated it as ſuch, in a very proper manner.

The gentleman had very frequent motions to ſtool, and the motions extremely urgent. Some thin excrement was always diſcharged on theſe occaſions: the pains gradually leſſened for a time, and then returned with the like violence and the ſame effects.

Rhubarb, teſtacea, demulcents, anodynes, had been occaſionally given; but the diſorder ſtill continued, and the pains and diſcharges, though rather leſs frequent, ſeemed to be more violent. From the violence of theſe returns, I began to ſuſpect they proceeded from ſome obſtruction in the *rectum*. The pains were previous to the diſcharge; a *teneſmus* always ſucceeds it. On enquiry, I found my patient was always diſpoſed to be coſtive; that he had been ſo many days preceding this diſeaſe; that he had not paſſed a figured ſtool of a fortnight: I gueſſed therefore, that the diſcharge

diſcharge of thin excrement was forced by the painful throws paſt the obſtructing collection.

I requeſted the apothecary's ſervant, who was in waiting, to dip his finger in oil, introduce it into the *rectum*, and try to diſcover if my ſuſpicions were well-founded; and if they were, to endeavour to break the hardened *ſcybala*, and bring them away, either by his finger, or a narrow ſpoon, the beſt inſtrument we could then find.

It proved as I had ſuſpected, and the young man performed his part ſo well as to bring away a very large lump of hardened *fæces*, which could not by any other means have been diſcharged. Emollient clyſters, and oily relaxing draughts, ſoon brought away the reſt, and our patient was effectually relieved from that moment.

Another caſe, not altogether diſſimilar, may be worth mentioning. I was deſired to viſit a gentlewoman near ſixty years of age, of a conſtitution rather plethoric, and, to appearance, healthy, except from the effects of the preſent indiſpoſition. She complained

complained of very ſharp, but intermitting pains of all the parts about the *pelvis*. She compared them to labour-pains in reſpect of violence, and of longer duration: juſt, ſhe ſaid, as if the womb, bladder, and all within her, were forcing outwards: every half-hour almoſt they returned, and had ſo continued near a month before I was called to her.

An ingenious apothecary, converſant in midwifery, had ſuſpected that ſome hardened *fæces* in the *rectum* increaſed the malady, if they were not the ſole cauſes of it. He was permitted to examine; but, by introducing the finger as high as poſſible, he could diſcover nothing of this kind, but found the *uterus* much enlarged and very hard, compreſſing the *rectum* in ſuch a manner as to prevent any thing but what was in a very liquid ſtate from paſſing, and ſuch kind of liquid ſtools were diſcharged very frequently, ſo as to imitate a genuine *diarrhœa*.

The *uterus*, when examined, was exquiſitely painful to the touch. The urine was diſcharged with much difficulty, owing,

owing, as it was ſuppoſed, to the increaſed bulk of the *uterus*.

Upon enquiry, I found the kind of pain was ſuch as is above deſcribed. That the ſtools were always liquid, and theſe only forced away by pretty active purgatives, gentle ones having no effect, which never failed, at the ſame time, to increaſe theſe forcing pains immoderately. This had rendered the uſe of anodynes neceſſary at night, to allay the irritation produced by the purgatives.

Though from the account given me, there was much reaſon to apprehend the *uterus* was in a very morbid ſtate, probably verging to a cancer, as ſeemed afterwards to be more evidently the caſe; yet that ſome hard *fæces* might be one cauſe of the preſent pain ſeemed to me not improbable.

The apothecary, at my requeſt, examined the *rectum* again with his finger; but found no *fæces*. He then introduced a ſmall tallow candle, and puſhed it gently paſt the compreſſed part. Upon drawing it out, he obſerved ſome excrement ſticking to it. This induced him to paſs it again

to the obſtructing place, and, by degrees, he diſlodged a very large maſs of hardened excrement, which fell into the *rectum*, and being there broke with the finger and the ſcoop, was extracted. An emollient clyſter brought away the reſt, and ſhe now complained of nothing but fatigue and ſoreneſs.

Gentle laxatives now took effect, and her ſufferings were greatly diminiſhed. Thoſe ariſing from the morbid *uterus*, nevertheleſs, continued, as I was informed afterwards.

An opinion that purgative, or even laxative medicines deſtroy, or, in ſome degree, fruſtrate the efficacy of the bark, has contributed not a little to produce many troubleſome accidents of this kind: for, as a large quantity of bark is generally uſed in the cure of an ague, and as the bark is indiſſoluble in the ſtomach and bowels, it eaſily unites with the *fæces*, and forms with them ſuch large, hard, compact *ſcybala*, as can by no means paſs the *ſphincter ani*, without exquiſite pain and difficulty, and

ſometimes not without the aid of inſtruments.

When this is the caſe, the patient complains of excruciating forcing pains about the *anus*; but remitting. Some thin excrement is diſcharged, and the pain abates. A freſh ſpaſmodic effort follows, and with the like ſucceſs. It is a kind of ſpontaneous ſpaſm of all the parts in, or connected immediately with the *pelvis*, for the excluſion of this irritating ſubſtance. Should ſuch a thin diſcharge, attended with pain, lead any one to ſuppoſe it a *diarrhœa*, and, in conſequence of ſuch a ſuppoſition, treat it with aſtringents and opiates, it is evident that greater miſchief would enſue.

Should the deſcription given by the patient, and the preceding circumſtances of the caſe, induce one to doubt whether the diſeaſe is owing to conſtipation, a trial attended with no danger, and, in moſt caſes, with little difficulty, will ſoon clear up the matter. If the pain remits, and returns with violence after a ſhort remiſſion, and the patient has either taken the bark, or been long coſtive, there is reaſon to apprehend

hend the complaints are the conſequences of conſtipation, and can probably be relieved by no other means ſo ſafely and ſpeedily, as by manual operation.

But it appears, that a ſearch with the finger only, is not in all caſes ſufficient: the lodgment may be above its reach. A ſmall tallow candle may be paſſed ſo far as to put the affair out of doubt, and ſhould be recommended where, from concurrent evidence, ſuch a lodgment is ſuſpected.

## XI. *An Account of the Putrid Meaſles, as they were obſerved at* London *in the years* 1763 and 1768, *by* William Watſon, *M. D. F. R. S. Read* 9 January, 1769.

ONE of the good purpoſes expected from the inſtitution of the Medical Society was, to record obſervations upon diſeaſes which did not very often occur, or did occur under particular circumſtances; in order that phyſicians hereafter might know what appearances thoſe diſeaſes were, at ſuch a period, attended with; as well as the effects of the then medical treatment of them. The meaſles therefore, having, within theſe few years, viſited London and its neighbourhood, attended with ſymptoms very different from thoſe, which have been handed down to us by the more early medical writers, is the occaſion of this communication.

The meaſles, as they are more uſually ſeen, are an eruptive diſeaſe of a ſimply inflammatory nature, which the judicious Sydenham

Sydenham * long ſince obſerved, were totally free from danger, provided they were not unſkilfully treated. This obſervation, however, whatever regard may be due to that excellent phyſician, muſt not be taken in too ſtrict and literal a ſenſe: becauſe, according to this aſſertion, whoever died during the courſe of the meaſles, their deaths were owing, not to the diſeaſe, but to the treatment, which, in every caſe, cannot be allowed.

This diſeaſe however appears at times under circumſtances very different from thoſe recorded by Sydenham: or, to adopt the language of the naturaliſts, what we ſometimes ſee, though of the ſame genus, ſhould be conſidered as a different ſpecies of meaſles. They ſeem to bear the ſame relation to one another, as the diſtinct ſmall-pox do to the confluent.

Of this more dangerous kind ſeems to have been the meaſles, called by that excellent obſerver Morton, in his ‡ Appendix *Morbilli Epidemii.* The other kind he calls

* De Morbillis, anno 1670. ‡ Appendix, page 241.

*Morbilli genuini et benigni.* Of the former, or malignant kind, was the diſeaſe, which, according to Morton, raged ſo ſeverely at London during the autumnal months of the year 1672, that near three hundred died weekly of it. This number of deaths he takes notice of, both in the Pyretologia *, and in his Appendix ‡; and adds further, that it then appeared like a gentle kind of plague, and ſpared neither age nor ſex.

Dr. Sydenham has given the hiſtory of the meaſles of the year 1670, which he conſidered as the moſt perfect of their kind. He mentions alſo the meaſles, as being frequent in ſome of the ſubſequent years; it is therefore ſomewhat remarkable, that

* Morbilli—maligni—ut plurimum more peſtis ipſius exitiales ſunt. Hoc morbo poſt annum 1670, Londini publicé graſſante, tercentos plus minus, ſingulis hebdomadis, periiſſe memini.———Pyretologiâ, page 25, 26.

‡ At locum dedit (Febris Συνεχὴς) morbillis epidemiis, qui ad inſtar peſtis mitioris, nulli ſexui vel ætati parcentes, adeò menſibus anni 1672, autumnalibus Londini ſæviebant, ut tercenti plus minus inde confecti, quâque hebdomadâ, ad orcum deſcenderent.

Morbilloſâ autem hac conſtitutione, poſt tyrannidem ad ſex menſes durantem, jam demum ſub finem hyemis ſenſim declinante, ac tandem penitùs exulante———Mortoni Appendix, page 241.

he

he takes no notice of the mortality occaſioned by this diſeaſe, which is mentioned by Morton to have happened in the year 1672.

My late much valued friend, Dr. Huxham, in his ſecond volume *De Morbis epidemicis* *, mentions the epidemic meaſles to have attacked at Plymouth, in the months of July, Auguſt, September, and October, 1745, not only young perſons, but adults; and that many died. Some ſeemed carried off by the peripneumony, others by a ſlow hectic waſting. Not uncommonly bloody ſtools came on, but more frequently a violent mucous *diarrhœa*. He ſometimes ſaw dreadful ulcers in the mouth, which brought on a *caries* of the jawbones, and a miſerable death.

By ſome papers, which have fallen into my hands ſince the death of Dr. Huxham, and are a continuation of his work *De Aere et Morbis epidemicis*, I find, that the putrid meaſles, attended with circumſtances ſimilar to thoſe juſt now mentioned, again viſited

* Vol. II. page 137, 139.

Plymouth and its neighbourhood, in the months of December 1749, and January and February 1750. *Morbilli*, ſays Dr. Huxham, *hoc tempore maxime ſunt epidemici, imó et ſæpe peſtiferi.*

Not unfrequently, during a courſe of many years practice, I have ſeen this diſeaſe, to which Huxham, as well as Morton, has given the appellation of *Morbilli Epidemici*; but I never obſerved it in the degree, in which it occurred twice at the Foundling Hoſpital ſince I have been phyſician there. The firſt time was in the year 1763, and the laſt in the ſummer of 1768; and of theſe I here mean to give ſome account. Between theſe two periods, in the year 1766, we had a conſiderable number attacked by the *Morbilli genuini et benigni*, or common inflammatory meaſles; inſomuch that out of three hundred and ſeventy-eight children, who were then in the hoſpital, ſeventy-four had the diſeaſe; but theſe all recovered, and are therefore here only curſorily mentioned.

In the year 1763, the firſt perſon ſeized with the epidemic meaſles was on April the twenty-

twenty-firſt; from which time, to May the fourth, two others only were affected by it. From this time to the ninth of June, which was the laſt day in which any one was ſeized with it, out of three hundred and twelve children then in the hoſpital, one hundred and eighty were attacked by this diſeaſe: and of theſe, one hundred and eighteen were ſeized before the end of the firſt fortnight. To this number the before-mentioned three are to be added, to complete the number of thoſe, who had it at this period. Of this number, notwithſtanding the beſt endeavours of my learned collegue, Dr. Morton, and myſelf, ſo ſevere was the diſeaſe, that nineteen died; and a great number, though they ſtruggled through it, were ſo much debilitated, that after ſome weeks, their ſtrength not returning, it was judged neceſſary to ſend them into the country, where they all recovered, though very ſlowly.

The laſt time, viz. in the year 1768, of four hundred and thirty-eight children then in the hoſpital, one hundred and thirty-nine had this diſeaſe; but of theſe ſix only died.

died. The firſt child was ſeized on May the ninth, the laſt on June the ſeventh, though ten were attacked the preceding day. The diſeaſe at this time was more mild in its ſymptoms, and leſs dangerous in the event, than that of 1763. In that year, of all attacked, near one in ten died; in the laſt year, one was loſt only in twenty-three; and though the ſeaſon of the year was preciſely the ſame, the convaleſcents recovered much faſter.

It is not here neceſſary to recount the hiſtory of the genuine, or common meaſles, not only as it is already done by Sydenham, Mead, and others; but as the diſeaſe itſelf ſo frequently occurs to the obſervation of every practitioner. I ſhall only mention, that after the continuance of the watery eyes, ſwelled eyelids, running of the noſe, difficulty of breathing, cough and ſeveral febrile ſymptoms, for three or four days, the eruption appears, which, after occupying the ſkin ſucceſſively in various, and generally in moſt parts of the body for about four days more, goes off, and leaves the body covered with light branny ſcales.

About

About this time the febrile ſymptoms, cough, and difficulty of breathing grow worſe; eſpecially if bleeding and gentle evacuations have been neglected in the beginning: but theſe ſymptoms, by the treatment uſual in ſuch caſes, generally ſubſide in two or three days more; ſo that the whole of the diſeaſe, except what remains of the cough, is commonly determined in, and very rarely exceeds ten days, or at moſt a fortnight. It indeed very ſeldom continues ſo long.

In the malignant meaſles, to adopt one of Morton's appellations, the appearances are very different. Watery inflamed eyes, a cough, and an univerſal debility, were the firſt indications of a perſon's being attacked. To theſe generally ſucceeded a reſtleſs night. On the next day the fever uſually roſe to a conſiderable height, attended with pain and heavineſs in the head, at which time the eruptions appeared; ſo that moſt frequently, on the ſecond day the meaſles were viſible on moſt parts of the body. The cough and inflamed eyes grew worſe. The patient now complained of great heat,

oppreſſion

oppreſſion and reſtleſſneſs. The breathing was generally difficult, and there was no expectoration. The ſkin was uſually dry; the *fauces* were of a deep red colour, and the tongue moſt frequently foul. The thirſt was great. The pulſe was very quick, but ſeldom full, and they complained of great weakneſs. The eruption, heat, and inflammatory ſymptoms continued in the manner juſt now mentioned, more or leſs, according to the ſeverity of the diſeaſe, four or five days, and then went off. In ſome inſtances, they continued a few days longer; but, in the greater number, the eruptions were gone at the end of the fourth day. This I conſider as the firſt ſtage of the diſeaſe.

The ſecond, or laſt ſtage of the malignant meaſles, began after the febrile heat was over, and the eruptions had diſappeared. The watery eyes in many, were now turned to a grievous ſoreneſs in that organ, which laſted in ſome a conſiderable time. The cough, oppreſſion, and difficulty of breathing continued equally ſevere, and ſometimes more ſo than during the eruption,

eruption, attended with great reſtleſſneſs and anxiety, and with ſcarce any expectoration. The thirſt was abated. The pulſe was quick, but low, and frequently irregular; and the debility in many was extreme, eſpecially if, at this period, the patient was teazed with purging ſtools. By this time they were greatly reduced in their fleſh. If, in this ſtate, a delirium came on, it generally indicated that death was not far off. And here I cannot but obſerve, that Dr. Mead, in his diſcourſe concerning the meaſles, reprehends Sydenham for not having directed bleeding at the beginning of this diſeaſe; but neglected this material part of the cure ſo far, that he only ordered it at the end, when a hot regimen and too warm medicines had brought upon the patient a cough and ſhortneſs of breath. If Dr. Mead had ſeen and attended to the kind of meaſles, of which we are now treating, he would have obſerved a cough and ſhortneſs of breath, after the feveriſh heat and eruptions were gone off; though bleeding, and even a repetition of it, had not been omitted in the beginning, and no

warm

warm medicines during the febrile ſtate had been directed.

If, in the ſecond ſtage of the diſeaſe, the dryneſs of the ſkin went off, and gentle perſpiration returned; if the reſtleſſneſs and anxiety were abated; if the cough and difficulty of breathing became leſs ſevere; and if the patient recovered a little ſtrength; theſe were favourable appearances. The reverſe of theſe indicated miſchief.

Of thoſe who died, we loſt few in the firſt ſtage of the diſeaſe; ſeveral on the two or three firſt days of the ſecond; more between the ſecond and third week. Some indeed died even more than a month after their being firſt attacked. Of thoſe who died, ſome ſunk under laborious reſpiration; more from a dyſenteric purging, the diſeaſe having attacked the bowels; and of theſe one died of a mortification in the *rectum*. Beſides this, ſix others died ſphacelated in ſome one or more parts of the body. The girls who died, moſt uſually became mortified in the *pudendum*. Two had ulcers in their mouth and cheek, which laſt was ſo corroded by them, that the cheek, from the

ulcers within, ſphacelated externally before they died. Of theſe, one had the gums and jawbone corroded to ſo great a degree, that moſt of the teeth on one ſide came out before ſhe died. The lips and mouths of many who recovered were ulcerated, and continued ſo a long time. Symptoms like theſe, Dr. Huxham obſerved to have happened to thoſe, who were attacked by the malignant meaſles at Plymouth in the year 1745.

Beſides theſe, after the cough, difficulty of breathing, and other ſeemingly threatning ſymptoms were gone off, ſeveral were ſo debilitated, that they refuſed to take almoſt any nouriſhment, and ſunk quite emaciated; one ſo late as ſix weeks after the attack.

Several were opened who died under different circumſtances attending this diſeaſe. Of ſome who died of laborious reſpiration after the feveriſh heat and eruptions were paſſed, the bronchial ſyſtem was found very little loaded with *mucus*; but the ſubſtance of the lungs was tender, and their blood-veſſels were very much obſtructed

ſtructed and diſtended. In a girl who died on the nineteenth day, of laborious reſpiration and extreme debility, many ſtrong adheſions were found between the lungs and *pleura*. The lungs were diſtended with blood, and the left lobe had begun to ſphacelate. Part of the *jejunum* was much inflamed, and contained ſeveral worms.

Another died at the end of three weeks, during which time his breathing had been very difficult. For ſeveral days he had had a colliquative purging; but when he was apparently no worſe than he had been for ſome days before, he died ſuddenly. He had complained much of a ſharp pain under the left *ſcapula*. Upon opening the *thorax*, the blood-veſſels of the lungs were found much enlarged, and a *ſphacelus* of conſiderable extent in the left lobe. This, by corroding the blood-veſſels, occaſioned an *hæmorrhage*, which filled almoſt the left cavity of the cheſt. The ſphacelated part of the lungs contained a conſiderable quantity of putrid, dark coloured, highly offenſive *ſanies*.

Collections of purulent matter were obſerved in none; on the contrary, in this putrid diſeaſe, every morbid appearance indicated a ſphacelus.

In the year 1763, the firſt of the years mentioned in this paper, the meaſles were very frequent in London; and, as appears by the bills of mortality, very fatal; no leſs than ſix hundred and ten dying in that year, of this diſtemper. This is much more than double the number of deaths by the meaſles in the year preceding, viz. 1762, and the two ſucceeding years, 1764 and 1765. In theſe three years died no more than two hundred and forty-one. In the year 1766, there died four hundred and eighty-two. In the year 1768, the ſecond time that the Foundling Hoſpital was attacked by the diſeaſe in queſtion, the deaths in London amounted to four hundred and nine.

It is now incumbent upon me to add a few words in relation to the medical treatment of this diſeaſe: but here permit me to premiſe, that every experienced practitioner knows, how well perſons labouring under the common meaſles bear bleeding,

blood-veſſels of the lungs were obſtructed and diſtended; and conſequently, the blood itſelf much retarded in its progreſs through the lungs; yet the general *plethora* was abated, and a partial one only of the pulmonary blood-veſſels continued. The obſtruction was of thoſe veſſels only, which received their fluid from the right ventricle of the heart. The taking away blood, therefore, from any veſſel furniſhed with this fluid from the left ventricle, after the general febrile ſymptoms had ſubſided, relieved, in a very partial manner, the obſtructed veſſels, which were ſituated between the right and left ventricle of the heart. The patient ſeemed to loſe more by the debility increaſed by the loſs of blood, than was gained in the relief of the obſtructed lungs.

After bloodletting in the beginning of the diſeaſe, the cleanſing the ſtomach and bowels with ſmall doſes of *emetic tartar* was of ſignal ſervice, as it generally mitigated the ſymptoms. After this, cooling, mild antiſeptics were directed. The chambers where the ſick lay, as the diſeaſe happened

happened both times in ſummer, were kept cool. If they had no purging, their common drink was pectoral decoction, with a due mixture of ſimple *oxymel*; and of this they were directed to drink plentifully. If they diſliked this, barley-water with vinegar, or balm-tea, were ſubſtituted. In a few caſes where the ſymptoms ran high, and there was a great reſtleſſneſs, attended with a dryneſs of the ſkin, tepid bathing of the whole body, as long as the patient could conveniently bear it, was of great relief. This practice was chiefly confined to the inflammatory ſtate of the diſeaſe; as afterwards, on account of the debility moſt uſually attending the ſick, it was not thought adviſable. The uſe of bliſters was not found to be ſo extenſive in the firſt as in the ſecond ſtage.

The treatment in the ſecond ſtage was not only widely different from that in the firſt, but was different to different perſons, and even to the ſame perſons, as ſymptoms indicated. Bliſters, as I juſt now mentioned, relieved many. As all the ſick were greatly enfeebled, wine was given

them, either in whey or in their common drink. If griping colliquative ſtools came on, which often happened, an infuſion of *radix ſerpentariæ Virginianæ*, with *confectio cardiaca*, was directed, to which were occaſionally added, ſome drops of *thebaic* tincture; which tincture alſo was ſometimes given with ſmall mutton-broth as a clyſter. Their nouriſhment was rice gruel.

If the cough and difficulty of breathing were moderate, their debility was greatly relieved, by taking liberally of decoction of *Peruvian* bark. Where, I ſay, the diſorders of the cheſt were moderate, this medicine was of ſignal ſervice. But it ſometimes happened, which is not to be wondered at, that the breathing became more laborious by its uſe; and in ſeveral caſes, it was much to be lamented, that when ill-conditioned ulcers in the mouth, and in other parts of the body, indicated the highly ſphacelating tendency of the habit at that time, and the neceſſity of adminiſtering the moſt potent antiſeptics, this noble medicine could not be given on account of its effect upon reſpiration. In any putrid diſeaſe,

more

more eſpecially if it is far advanced, there cannot be a more embarraſſing ſymptom than an attendant peripneumony. Under theſe circumſtances, *radix ſerpentariæ Virginianæ* was generally ſubſtituted; but its effects were far leſs beneficial than it was imagined thoſe of the *cortex* would have been under ſimilar circumſtances, had not its effects upon reſpiration prevented its being adminiſtered.

Late in the diſeaſe, when the ſtomach was enfeebled to a degree that the patients could not be prevailed upon to take any nouriſhment of the more ſolid kind, a draught of freſh milk, either alone, or mixed with water, was moſt grateful; and tended much to the alleviation of their complaints, as well as recruiting their ſtrength.

To what I have already ſaid, permit me to ſubjoin, that though, eſpecially in the year 1763, of the whole number attacked, near one in ten died; it muſt be remembered, that a large proportion of the whole number were ſeverely attacked; and recovered, though they lay long in very dangerous circumſtances.

Though not immediately to the preſent ſubject, I muſt add a few words in relation to an opinion vulgarly received, but which ſeems not to have the leaſt foundation in truth: This is, that the having had the meaſles a few weeks before, is an excellent preparatory to the ſmall-pox; as thereby this latter diſeaſe is ſuppoſed to be rendered more mild, and conſequently, leſs dangerous. How far the having had the ſimple inflammatory meaſles in a gentle manner a few weeks before the ſmall-pox, will make the latter diſeaſe worſe, I will not take upon me to determine. It ſhould ſeem, that any one would be enabled to ſuſtain an acute diſeaſe the better, the nearer the conſtitution approached to the ſtandard of health. The being enfeebled by one diſeaſe, renders the body leſs capable of ſupporting a ſecond. I know no particular relation between the meaſles and the ſmall-pox. They are both, indeed, eruptive diſeaſes; and though I am perſuaded that the puſtules of the latter are critical diſcharges of the variolous matter, yet I conſider the eruption of the meaſles, not as a critical

and

and depuratory diſcharge, but as merely ſymptomatic; as it is well known, that the cough, peripneumony, and other febrile ſymptoms, are not relieved by the eruption, but moſt generally continue after it is over.

In the months of May and June 1763, when there was in the Foundling Hoſpital a great number of children recovering from the malignant meaſles, which, as has been mentioned, had been, and were then, very prevalent, the ſmall-pox attacked many children; and among theſe were eighteen who had lately gone through the meaſles. To thoſe who had had the meaſles, (as it happened the preceding year to thoſe who were recovering, or had lately paſſed through the dyſentery or dyſenteric fever, which were then, and had been very prevalent,) the ſmall-pox was much worſe than to the others; and eleven died. This aſtoniſhing mortality among theſe aroſe from the diſeaſe in general being of a more malignant and confluent kind than it is uſually obſerved to be. In the ſix laſt months of the preceding year 1762, out of ſixty, who, without

without previous ſickneſs, had the ſmall-pox in the natural way, under the ſame care and direction with the others juſt now mentioned, fifty-ſix recovered and four only died. A remarkable difference!

Taught, therefore, by experience, I have, ſince that time, refuſed being concerned in any inoculation, where the patient had lately had the meaſles. In the ſummer 1768, when the putrid meaſles were again very prevalent in the Foundling Hoſpital, and when a great many children in London and its neighbourhood were likewiſe affected by it, I was conſulted in relation to a child then dangerouſly ill of this bad kind of meaſles, but who afterwards recovered. In a little while after the recovery of this child, I was again adviſed with in relation to its being inoculated with ſome other children of the ſame parents, who had lately had the common meaſles in a mild and favourable way. I refuſed my conſent to its being inoculated, till at leaſt ſix months after its recovery from the former illneſs. This advice was not followed, and the

the child was inoculated by one whoſe fears were leſs than mine. The event was, that though the others had the ſmall-pox in a very favourable manner, this child had the confluent kind, was in great danger both before and after the eruption, and, with much difficulty, ſtruggled through the diſeaſe.

From what I have ſeen therefore, I ſtand not in need of further conviction of the danger of having the ſmall-pox in any way ſoon after the meaſles; eſpecially after the more malignant kind, ſuch as are the occaſion of this paper.

XII. *Ob-*

XII. *Obſervations on the Bilious Fever uſual in Voyages to the* Eaſt Indies, *by* James Badenoch, *M. D. Communicated by Dr.* Watſon. *Read* 20 February, 1769.

THE great affinity of this fever to thoſe which are ſo frequent in all the warmer climates, renders it here unneceſſary to relate its hiſtory: my deſign in this place is, only to mention a few practical obſervations, which have occurred to me during theſe voyages, and which ſeem to merit ſome attention.

The pernicious influence of the night-air upon the conſtitutions of Europeans, unſeaſoned to the torrid zone, who ſleep in the woods, or in the neighbourhood of marſhes, hath been taken notice of by many medical authors, but particularly by Doctor Lind and Doctor Rouppe; yet, however clear theſe gentlemen have made this ſubject, it is aſtoniſhing that ſo little regard hath been paid to their obſervations, ſeemingly of ſuch importance, eſpecially to fleets ſtationed abroad.——The following obſervations

obſervations tend evidently to confirm their opinions.

Mr. Robert Bruce, Surgeon of the Ponſborne Eaſt-Indiaman, favoured me with the following facts:——Auguſt 25th, 1765, the Ponſborne anchored to leeward of the iſland of Mohila *. They immediately ſent their ſick aſhore, conſiſting of about fifty, in different ſtages of the ſcurvy. September 2d, The ſcorbutics being recovered, they left that iſland; but they were becalmed till the 5th; upon which day above forty of their people were attacked with bilious vomiting, proſtration of ſtrength, &c. theſe chiefly conſiſted of thoſe, who had been on ſhore for the cure of the ſcurvy.—Beſide theſe, the carpenters, coopers, and boats crews, who, by their neceſſary avocations, had ſlept on ſhore during the ſhip's continuance at that iſland, were ſeized with this fever, moſt of whom died.

* Mohila and Joanna are two iſlands in the oriental ocean, ſituated not far from the north end of Madagaſcar, at which the Eaſt India Company's ſhips uſually call, in order to wood and water.

It may not be improper, in this place, to obſerve, that the carpenter and his crew, conſiſting of nine in number, by their all ſleeping on ſhore, catched the fever and died, except one, who was a negro *.

I made the following remarks on board the Nottingham Eaſt Indiaman.——July 16th, 1766, we came to an anchor to leeward of the iſland of Joanna. The anchoring ground is very near the ſhore, and deeply embayed. The ſick, chiefly ſcorbutics, to the number of about forty, were ſent on ſhore to live there during our ſtay. The carpenters, coopers, and ſeveral others, likewiſe ſlept on ſhore.——July 21ſt, we left that iſland, moſt of our ſcorbutics being recovered. During the remainder of that month we were becalmed in ſight of the iſland. From the beginning to the 10th of Auguſt, moſt of thoſe who had ſlept on ſhore were attacked with bilious and remitting fevers of a bad ſort. Few, if any of the other people of the ſhip, were ſeized

* The Ponſborne buried, in the ſpace of a few weeks after they left Mohila, above ſeventy of their people, of this fever.

with

with them, from which it did not appear to be infectious.

That the ſcurvy had no ſhare in producing this fever, was evident, in that the officers, who were healthy, and who had ſlept on ſhore, ſome on duty, and others on pleaſure, were equally liable to the attack of this diſeaſe, with the ſcorbutics.—Of nine people who ſlept in a tent, chiefly officers, ſeven were ſeized with this fever, and two died: the other two eſcaped; the one by ſleeping in a good ſea-coat well protected from the nocturnal air; and the other, who was a recruit, was obſerved to be for the moſt part drunk.

That the night-air hath a very powerful influence in occaſioning theſe fevers, there is not the leaſt doubt. I remember, that, ſtaying one evening on ſhore till about eleven o'clock, I perceived all the ſymptoms of an approaching fever; a ſhivering laſſitude, and a ſort of confuſion in the head; but by going on board immediately, and keeping warm during the night ‡, I found myſelf perfectly well next morning.

‡ The mean height of Farenheit's thermometer hung up in the ſhade on board of ſhip, was about 80°, and I obſerved it ſink two or three degrees in the night.

There

There was, during our ſtay at the iſland of Joanna, a French Eaſt-Indiaman in the ſame bay. It was cuſtomary with them to ſend their people on ſhore every morning, and take them on board every evening a little before ſun-ſet; and in this they certainly acted very judiciouſly.

In what manner the night-air, in the warmer climates, acts ſo powerfully in occaſioning putrid fevers, whether by impeding perſpiration, or by exciting a ſpaſmodic affection of the vaſcular ſyſtem ‡, is not much to our preſent purpoſe: it is ſufficiently apparent, that the guarding againſt its bad effects, is a matter of ſome conſequence; and it is to be wiſhed, that thoſe who have the direction of theſe affairs, would pay ſome attention to this particular, and give inſtructions to their commanders, never to allow any of their people to ſleep on ſhore, if it poſſibly can be prevented.

## REMARKS ON THE CURE.

To expect ſucceſs in treating theſe fevers, it appears to me neceſſary to pay particular regard to their different degrees of violence,

‡ Vide An Eſſay on Fevers, by Dr. Chalmers.

if

if I may be allowed the expreſſion: For example, the bilious fever in the north of Germany, is much leſs violent than the ſame fever is in Minorca; and this again, than thoſe frequent in Africa or the Eaſt Indies. The appearances and method of treating of bilious fevers in voyages to the Eaſt Indies, tend equally to confirm this obſervation; for the fevers which generally prevail on board Eaſt India ſhips while on the ocean, are much leſs violent than thoſe on board the very ſame ſhips, after being for ſome time in any of the ports in the torrid zone; and it is abſolutely neceſſary, that the method of cure ſhould be adapted to each of theſe circumſtances.

For the cure of the bilious fever, moſt frequent while at ſea, bleeding in the beginning, eſpecially in athletic conſtitutions, was generally neceſſary; after which, and the uſe of antimonial medicines, and ſaline mixtures given in the act of effervescence, the fever ſoon came to intermit; and then the *cort. Peruv.* being adminiſtered for a few days, completed the cure. Although this method will, in general, ſucceed for the

cure of this fever while at ſea; yet I have obſerved, that now and then ſome of theſe fevers were as violent as thoſe uſual in a port; and unleſs the ſame method of cure was followed, viz. by giving the bark, without waiting for an intermiſſion, the patient was carried off in a very ſhort time. By a proper regard to this circumſtance, the practitioner hath an opportunity of ſhewing his judgment.

In reſpect to the method of treating theſe fevers, which are moſt frequent when ſhips are in the ports of the Eaſt Indies, I ſhall here ſubjoin, in a ſummary manner, the few following remarks.

Even though the fever runs high, bloodletting is ſo far from being adviſable, that I believe it is hurtful. Of the patients violently attacked by this fever at Joanna, I bled only two, one of which died the day following; the other, Mr. Thomſon, my mate, eſcaped by ſoon after taking the bark. Mr. Bruce, for the cure of the violent fever, which carried off ſo many of the crew after leaving Mohila, alſo bled two of his patients, one of which expired ſoon after,

after, the other recovered.——Dr. James Lind, in his Inaugural Theſis on the Bengal fever, obſerves, that by taking away only a few ounces of blood in the intermiſſion, there followed ſuch a proſtration of ſtrength, that they ſunk under the violence of the next paroxyſm*.

Having found that bleeding did not anſwer, I began with a vomit, compoſed of two grains of *tartar emetic*, rubbed with three or four grains of the powder of *ipecacuan*; when this acted both upwards and downwards, it was the more uſeful; and frequently ſeemed to check the future violence of the fever.

Soon after the operation of the vomit, I gave antimonials in different forms; the moſt frequent was one grain of *tart. emetic*, with five of the *pulv. contray. c.* and this to be taken in a ſpoonful of water every ſecond hour, until it procured a vomiting, purging, and ſweating; and when it acted in all theſe ways, it generally had the better effect. It appears to me, however,

* Diſſertatio medica inauguralis; de febre putrida in Bengalia, 1762.——Edinb. 1768.

a more convenient form of adminiſtering this medicine in the way Dr. Tiſſot recommends*. With the ſame intention, I have given many papers of Dr. James's powder with great benefit. I uſually ordered five grains of it in water every two hours, until it had the deſired effect; and muſt acknowledge it deſerved the preference to the other preparations of antimony.

Having uſed theſe medicines for ſome days, I then gave the ſaline preparations, viz. the ſpirit. Minderer. the formula of Sir John Pringle, Riverius's antiemetic mixture, in the act of efferveſcence; and to have this efferveſcence the more complete in the ſtomach†, I gave to ſeveral patients from twenty to thirty grains of the *ſal. abſynth.* in the form of a bolus: immediately after which, the patient ſwallowed a ſpoonful of lemon-juice or vinegar. This I ordered ſeveral times in the day.

With regard to bliſters in the cure of this fever, I have uſed them many times, as well for the fevers uſual at ſea, as in

* Tiſſot on Bilious Fevers, p. 46.

† Dr. Macbride's Exper. Eſſays, Eſſ. III. Exper. 25.

ports;

ports; but I cannot ſay, that I ever ſaw any manifeſt advantage from them.

During the courſe of theſe fevers, eſpecially in the warmer climates, the ſick are to be ſupplied with plenty of cool antiſeptic liquors; ſuch as barley or rice water, acidulated with either the vegetable or mineral acid. Cyder and water mixed, is likewiſe a very agreeable drink.——It is alſo abſolutely neceſſary to allow the ſick to lie in ſuch places of the ſhip, as are beſt aired; for example, thoſe on the lower deck are to be removed up to the gun deck, where, by means of the gun ports, the air may be as freſh as poſſible; *to be careful in following this cool method*, the preſent ſucceſsful manner of treating the ſmall-pox, I dare ſay, will be ſufficient *encouragement*.

I ſhall here obſerve, that whenever theſe fevers do not proceed with ſuch rapidity as to threaten immediate danger, it is, no doubt, adviſable to begin their cure by the uſe of the preceding remedies; but if, on the contrary, the pulſe and ſtrength fails, or the exacerbations become ſevere, with other ſymptoms of impending danger, the

*cortex peruvianus* is the only medicine to be depended on.

During the rage of the Joanna fever, I began the cure with evacuants, &c. in expectation of procuring a plain remiſſion or intermiſſion: but I found myſelf much deceived; for it aſſumed the appearance of a continual, with now and then violent exacerbations, under which ſeveral ſunk. Fearing this might be the fate of the greateſt part of thoſe at the ſame time ill of this fever, I, without further delay, gave between thirty and forty patients in the different ſtages of that fever, one drachm of the *pulv. cort. peruv.* in wine, or in wine and water; and this to be taken hourly.—— Several were, at the time of adminiſtering this remedy, ſeemingly within a few hours of their end, with the pulſe ſunk, and an almoſt univerſal coldneſs of the body, who yet, after a few doſes of the bark, were much better, and by continuing it for a day or two, recovered.

I obſerved, that this medicine was ſo far from preventing natural evacuations, that, on the contrary, it promoted them, eſpecially

cially if evacuants had not been given previous to its adminiſtration; and further, that thoſe who took this remedy earlieſt, recovered more perfectly than thoſe who, by evacuants, and the ſeverity of the diſeaſe, had ſuffered much before it was uſed. Which obſervation, when joined with this, that recoveries in the torrid zone are ſlow and uncertain, are ſtrong arguments in favour of the early adminiſtration of this medicine. And as for the doſe of it, the practical rule of Dr. De Haen, I believe is, in theſe fevers, a very proper one, viz. "Neque pondus hic quidquam aut menſura "determinat, ſed morbi levamen."

Since Mr. Cleghorn's publication, ſeveral practitioners in different places have favoured the public with their obſervations, demonſtrating the good effects of the bark when given early, and in large doſes, for the cure of the worſt ſpecies of bilious fevers.

XIII. *An Account of a new Method of amputating the Leg a little above the Ancle Joint, with a Deſcription of a Machine particularly adapted to the Stump, by Mr.* Charles White, *Surgeon to the* Manchester *Infirmary. Communicated to Dr.* Hunter. *Read* February 20, 1769.

IN diſorders of the ancle which require amputation, I have often, with regret, deprived the patient of a great deal of the ſound part of the limb, by conforming to cuſtom in amputating at the uſual place, a little below the knee: for though, in all other amputations, ſurgeons endeavour to preſerve as much of the limb as poſſible; yet the difficulty that was found of adapting artificial legs to the end of the tender ſtump, and the inconvenience that attended ſo long a ſtump when they were fixed to the bended knee, made this practice very general; not that there have been wanting ſurgeons who have performed the operation in the lower part of the limb, and contrived artificial feet to walk upon; particularly in the

the laſt century, Verduin, Solinger, and Dionis; but no wonder it ſhould ſo ſoon fall into diſrepute, when the ſurgeons of thoſe days were unacquainted with the double inciſion, the flap operation was not brought to perfection, and their machines were complex, rude, and heavy in compariſon with ours.

The following circumſtance fixed my reſolution of operating in this part: At the latter end of the year 1760, I happened to ſee a woman who, twenty years before, had her leg taken off a little above the ancle, by advice of her brother, who was a carpenter, and had promiſed to make her a wooden leg of his own contrivance. The ſurgeon at firſt refuſed to amputate it in this place; but being told if he would not, they would apply to another, he conſented to do it, contrary to his own opinion. The operation was performed by the ſingle inciſion: the ſtump was twelve months in healing, and the ſurgeon died before the expiration of that time. Her brother made her the wooden leg, as he had promiſed, and a very indifferent one it really was; but,

but, notwithſtanding all theſe diſadvantages, ſhe declared ſhe would not have had it taken off in the uſual place, upon any account whatſoever, as ſhe found ſhe had ſo greatly the advantage of others on whom it had been performed in the common way. Indeed, ſhe herſelf had, for a little while, worn a common wooden leg fixed to her bended knee; but ſoon threw it aſide in favour of the other, which gave her the free uſe of her knee-joint in flexion and extenſion. I was myſelf fully convinced of the utility of this method, from her great activity both in walking upon level ground, and in going up and down ſtairs; and I had no doubt but a better ſtump might be made, as well as a more convenient machine contrived.

The firſt opportunity I had of operating in this part was on Auguſt 10th, 1761, upon William Slater, whoſe caſe I have related in my account of the uſe of the ſponge in the ſtoppage of *hæmorrhages*, (Caſe IV.) I purpoſely omitted, at that time, mentioning any thing of the method of operating, as it was foreign to my

intent in that publication, and I fully propoſed giving it to the public, as ſoon as experience had enabled me to ſpeak with greater certainty. I performed it by the double inciſion, beginning the firſt as near the ancle-joint as I could, in order to make as long a lever as poſſible, and thereby give him a greater power in walking. The ſtump was healed in about three months, and he died of a conſumption ſoon after, ſo that I had no opportunity of trying a machine to walk with.

The next leg that I amputated above the ancle, was that of James Oats, a patient in the infirmary, on September 1ſt, 1761, whoſe caſe is likewiſe related in the ſame pamphlet, (Caſe IX.) This I did not take off quite ſo low as the former; by which I thought to make a better ſtump, as there would be rather more ſubſtance in the lower part of the muſcles than in the *tendo achillis*, from whence granulations of fleſh would be more likely to ſprout up. This method fully anſwered my expectations; the ſtump was entirely healed in ten weeks; and was not in the leaſt pointed, but perfectly

fectly flat at the end; when he was fitted with a machine, *(ſee the Fig.)* ſimple in its contrivance, and of an eaſy expence. After this, I took off ſix in the ſame manner, and had the ſatisfaction to ſee them all fully anſwer my expectations. I afterwards recommended this method to ſeveral gentlemen both in London and in the country, and found with pleaſure, that they were equally ſucceſsful; nor did I ſee that any improvement could be made in this operation, till the latter end of the year 1765, when Mr. O'Halloran, a ſurgeon at Limeric in Ireland, publiſhed his *complete treatiſe on gangrene and ſphacelus*, with a *new method of amputation*, which is an improvement of the flap operation. The flap operation was originally an invention of Lowdham an Engliſhman, and publiſhed by J. Young in 1679, in his *Currus triumphalis ex terebinth.* It was afterwards practiſed by ſeveral French, German, and Dutch ſurgeons; but being, from many trials found inſufficient, was entirely diſuſed. The merit of bringing the flap operation to perfection, was reſerved for Mr. O'Hal-

O'Halloran, and he is juſtly entitled to the thanks of the public for it. The chief alteration he made, was, inſtead of uniting the flap immediately, to defer it till the 10th, 12th, or 14th day, and to dreſs the extremity of the ſtump and the flap as diſtinct and ſeparate ſores till that time, when all inflammation will have ſubſided, the rough edges of the bone will be covered, and the ſuppuration will be completely eſtabliſhed; and on this circumſtance alone the ſucceſs depends. He had not, when this treatiſe was publiſhed, operated in this manner more than three times; and theſe were amputations of the leg in the uſual place below the knee. He, indeed, very ſtrongly recommends it in amputating the thigh, arm, and forearm, and has laid down plans for the operation. He moreover ſays, (p. 266.) "In the common "method, a diſorder even of the foot "makes amputation near the knee neceſ-"ſary, becauſe here the wooden leg reſts; "but in this you may cut much lower "down, as the extremity of the ſtump "may reſt in the hollow of an artificial

"leg, which the cuſhion of fleſh enables "it to do, and the remains of the limb will "have the power of bending and extend- "ing as freely as ever."

I tried the flap operation in the firſt caſe I had (after reading Mr. O'Halloran's treatiſe), in which amputation in the lower part of the leg was adviſable. I began my inciſion where the *tendo achillis* is inſerted into the *os calcis*, and with one ſtroke of a ſtreight knife, cutting obliquely upwards for about three inches, I formed the flap in which the tendon was included, then, with one ſtroke more of the ſame knife, by a ſemicircular inciſion, I cut down to the bones at once. After the operation was finiſhed, the ſtump and flap were dreſſed ſeparately. The flap was laid gently up to the end of the ſtump; but kept from coming into contact with it by the intervention of the dreſſings, which were renewed in the ſame manner as often as was neceſſary, to prevent its being offenſive, till the 12th day, when the flap was laid up to the bare ſtump, and retained there by ſlips of good ſticking plaſter. In a few days,

days, it was evident, that the flap began to adhere, and the ſtump was perfectly healed in leſs than two months but he was detained a little longer in the infirmary, to have a machine fitted to his ſtump.

When I firſt began to amputate in this part in the year 1761, and for ſome years after, I was very cautious to prevent the end of the ſtump from preſſing upon the bottom of the ſocket that contained it; but after performing the flap operation, I found this caution unneceſſary, as the patients, before they left the infirmary, could put the end of the ſtump to the ground, and reſt their whole weight upon it.

*A Liſt of Perſons upon whom the Flap Operation in the Ancle was performed.*

| | | Age | When performed. 1766. | When diſcharged. 1766. |
|---|---|---|---|---|
| Patients in the Manchester Infirmary | Robert Thornton, | 21. | March 26. | June 2. |
| | Edward Serles, | 11. | May 16. | Auguſt 4. |
| | Robert Wood, | 62. | July 26. | Oct. 20. |
| | Alice Barlow, | 40. | Auguſt 1. | Nov. 20. |
| | | | 1768. | 1768. |
| | Robert Brierly, | 26. | May 12. | Auguſt 15. |
| | Ralph Mort, | 20. | June 17. | Auguſt 22. |
| Mr. Jonathan Jackſon Merchant, Lancaſter. | | 27. | Sept. 22. | Died about a month after. |

Mr.

Mr. Jackſon was in the laſt ſtage of a conſumption when the operation was performed; but as we often ſee ſurpriſing recoveries when the diſorder is occaſioned by abſorption, after removing the cauſe, we were willing to give this poor gentleman all the chance we could: *Anceps remedium ſatius eſt experiri quam nullum.* The caſe, however, certainly turns out in favour of the flap operation; for the flap was perfectly united before his death, which happened in a month after; and as he might be ſaid to be in a dying condition, I think we need not deſpair of *the union of the flap in any caſe whatever.*

## REMARK.

Notwithſtanding the very great improvements that have been made in ſurgery within theſe few years, and all that Mr. Bilguer has ſaid in his treatiſe on the inutility of amputation, that operation ſtill is, and I am afraid always will be, found occaſionally neceſſary. Not that I am an advocate for it in any caſe but to ſave the patient's life; and I muſt ſo far join with that

that gentleman, as to believe it is ſometimes unneceſſarily performed; but it is to be hoped, that the daily improvements in the art, will remove the cauſe of this reflection, and that every attempt to leſſen the inconveniencies neceſſarily attendant upon the loſs of a limb, will be well received by the public, and not conſtrued into a deſire of multiplying operations for a ſpecious ſhew of dexterity; for it certainly redounds more to the honour of a ſurgeon, to ſave one limb, than to take off a hundred.

It is further to be obſerved, that all the patients here mentioned were afflicted with diſeaſed joints from a ſcrophulous habit, which is extremely prevalent in this country, and renders a ſtump more tedious in healing, than moſt of the diſorders requiring amputation.

XIV. *A* Bubonocele, *attended with uncommon Circumſtances; with Remarks on the Uſe of Carrot Poultice. By Mr.* Henry Gibſon, *Surgeon at* Newcaſtle *upon* Tyne. *Communicated by Dr.* Hunter. *Read* October 31, 1768.

I Was ſent for to a boy about fourteen years of age, who had an *hernia inguinalis*. It was about ten o'clock in the forenoon when I firſt ſaw him; he had vomited and complained of much pain, from ſix o'clock the preceding evening; and now not only threw up every thing he took, but had alſo an inceſſant hiccup, great tenſion of the *abdomen*, and no ſtools. I bled him largely, ordered him purgative medicines and glyſters; none of which, however, having the deſired effect, I introduced a ſuppoſitory made of a ſmall candle rolled in ſoft ſoap and ſalt: immediately after bleeding him, I attempted the reduction of the *hernia*; it was ſmall, about the ſize of a large walnut; and as the integuments over it were lax, and not in the leaſt

inflamed, I made no doubt but that I ſhould ſucceed in reducing it. I was, however, diſappointed; I tried every method I could think of; had him ſuſpended over a man's ſhoulders, with his heels bent upon them; his body and head hanging down, but raiſed a little from the man's back, to leſſen the tenſion of the *abdominal* muſcles; a method by which I had ſucceeded ſeveral times, in caſes apparently much more difficult; but all in vain!—The ſymptoms were extremely acute; he rejected the purgatives as ſoon as he had taken them; the glyſters came away without any ſtool; but after the ſuppoſitory had been introduced about a quarter of an hour, he had a copious diſcharge of *fæces*; yet neither the vomiting, hiccup, nor pain, ſeemed to abate in the leaſt. He was bled a ſecond time; the part itſelf and the whole belly fomented; and then I attempted to reduce it, in all the various poſitions I had tried before, or could think of. Theſe efforts proving alſo unſucceſsful, I acquainted the parents with the imminent danger I thought the boy was in, and propoſed the operation

for the *bubonocele*, as the only chance to preſerve his life; which they by no means conſenting to, I ordered the glyſters to be repeated every hour, with the ſuppoſitory between each, and an embrocation to the part; telling them to ſend for me in two or three hours time, and inſtructing them to endeavour, in the mean time, to replace it themſelves; which directions indeed, they eaſily comprehended; for I found then, he had been ſubject to the complaint for ſeven or eight years before, and that the boy had frequently put it up himſelf, when it had appeared much larger than now. I went home, and about three or four o'clock in the afternoon, they ſent me word he was dead. I acquainted my friend Mr. Lambert, a very eminent ſurgeon, with the caſe, and expreſſing my ſurpriſe at the boy's dying ſo ſoon, deſired the favour of his company to go with me to examine him; accordingly we went, and found the following appearances, which made us think, this hiſtory would not be unacceptable to your Society.

The hernial tumor appeared externally, pretty much in the ſame ſtate as when I

fruitleſsly

fruitleſsly attempted the reduction; the integuments and hernial ſac being carefully divided, we found a ſmall portion of *omentum*, and a leſs portion of the inteſtine engaged in the ſtrangulation. After that, we opened the *abdomen*, when the ſmall inteſtines were found ſcarce diſcernibly inflamed, and the large ones not at all; we diſcovered an *appendicula*, (if I may be allowed the expreſſion) dependent from the *ileon*, of the ſize and form of the little finger of an adult's glove: this was about two inches or more from the ſmall portion of the inteſtine concerned in the ſtrangulation; which ſmall part was nothing more than a ſhallow *ſinus*, or cavity of the inteſtine, as if forming another appendicle, and was the only part of the inteſtine involved in the hernial ſac. That I may be better underſtood, I have incloſed a drawing, which, though but indifferently executed, will repreſent the thing juſtly enough.

That ſo ſmall a quantity of inteſtine and *omentum* as appeared engaged in this ſtrangulation ſhould prove fatal, was matter

of much ſurpriſe to us! The only obſtacles to reduction ſeemed to be the following: the hernial ſac adhered to the integuments; the mouth of it was rather narrow, and the *omentum* in it puckered up; yet one would have thought theſe would not have proved inſurmountable: and as the inteſtines continued pervious, it is probable, had the entangled part of the *omentum* only been withdrawn, the boy would have been relieved. Might not the inceſſant vomiting, hiccup, &c. in this caſe, immediately take their riſe from the connection of the *omentum* with the ſtomach; and when theſe ſymptoms are ſo very ſevere, is it not a very ſtrong preſumption, that the *hernia* is an *epiplocele*, or at leaſt, that the *omentum* has a ſhare in the diſtemper? At the ſame time, this hiſtory indicates to us the great utility and propriety of the operation for ſtrangulated *herniæ*, which, in all probability, would have ſaved this boy.

To this hiſtory I ſhall ſubjoin ſome obſervations I have made on the *malt infuſion*, recommended (for the ſea-ſcurvy) by the ingenious and benevolent Dr. Macbride, and on the

the carrot poultice, recommended by Mr. Soultzer, for cancerous complaints.

William Bell, a man between forty and fifty years of age, was admitted a patient into our infirmary, November 26, 1767, with a cancered *penis*; the *glans* and *præputium*, which, indeed, could not be diſtinguiſhed from one another, were monſtrouſly enlarged; the veins on the *dorſum penis* varicoſe; the pain excruciating; the whole ſurface of the tumour ulcerated, and the ſtench ſo intolerable, that it was not only diſagreeable to the patient himſelf, but to the whole ward where he was put. The poor man had been told, and came with a confident opinion, that he would be cured at our infirmary; and therefore, on a conſultation with my brethren, when it was propoſed to extirpate it, he would by no means conſent: we therefore gave him the *extract. cicutæ* internally, and made uſe of emollient anodyne applications to the part affected. This courſe was purſued about a month; but the diſorder increaſed upon us: the ſmell was become ſo very offenſive, that it was even perceptible on going up

ſtairs to the wards. About this time, I happened to read a paper in a magazine, written by Mr. Soultzer, which recommended a carrot poultice, as a very efficacious application to cancerous ulcers: it appeared to me to be written with much candour; and as the man would not ſubmit to the extirpation, I thought I would make a trial of it. Accordingly, I ordered ſome carrots *(rad. dauci ſativi)* to be grated, and moiſtened with as much water as would bring it to the conſiſtence of a cataplaſm, to be applied to the diſeaſed *penis*; at the ſame time, as his gums were looſe, accompanied with a bad breath, he was ordered to drink three pints at leaſt of the malt infuſion every day; the very next day we found that the carrot application had had a wonderful effect; for the offenſive ſmell was totally removed; the ſanious diſcharge leſſened; a foul ſlough came off with the dreſſing; and the pain was conſiderably mitigated. I was much pleaſed with the change occaſioned by this cataplaſm; and therefore ordered it to be applied two or three times every day, for a fortnight or

three

three weeks: the ulcer apparently grew better; the tumour ſenſibly decreaſed; the pain was more tolerable, and the proſpect much leſs unfavourable; for about this time, the ſwelling was reduced to near one-third of what it had been; it was alſo cleaner, and the application ſeemed to have greatly reduced the cancerous ſore; for there now appeared on the ſurface, a vaſt number of ſmall watry excreſcences, with the interſtices pretty clean and ruddy. But notwithſtanding this promiſing appearance, from this time forward no progreſs was made towards a cure. Whether this was owing to the carrots not being ſo ſucculent, or in ſuch perfection as at the firſt, I cannot tell: we perſevered in this method near two months longer, during which time, though the patient was tolerably eaſy, and quite free from any nauſeous ſmell, yet the cure ſeemed not to advance in the leaſt; wherefore the patient now ſtrongly importuned me himſelf to amputate, which I did, at about an inch from the *pubes*. It healed very readily, and he was diſcharged cured, the 31ſt of March, 1768.

The

The ſubſequent caſe was attended with more ſucceſs.

Ann Sandham, a woman about twenty years of age, was admitted a patient of the infirmary, the 19th January 1768. She had been afflicted during two or three years, with a large phagædenic ulcer on the foot, extending over the whole of the upper part of the *metatarſus*, and about two-thirds of the *tarſus*; the edges of the ulcer hard and inflamed; the whole foot ſwelled, and the inflammation of the integuments reaching halfway up the leg; the ſore very foul, with a gangrenous aſpect, attended with ſuch a fœtid ſmell as is not to be expreſſed.

This miſerable creature, weary of her life, came with an intention to have her limb taken off. She had been my patient five years before, for a mortification of all the toes of the ſame foot, which, with much difficulty, after their ſeparating had been healed; ſo that, having ſome reaſon to ſuſpect, that the toes had formerly ſphacelated from an oſſification of the arteries, my brethren of the infirmary, as well as myſelf, on conſultation, were averſe to amputation,

amputation, though much ſolicited to it by the miſerable creature herſelf; her blood alſo appeared to be in a putrid diſſolved ſtate; her breath very fœtid, and her whole look cadaverous. Having experienced in a late caſe, the excellency of the carrot poultice, in removing the nauſeous ſmell of an ulcerated cancer, I ordered it to be applied here, with an intention principally to get the better of that diſagreeable ſymptom, which, in this caſe, was to the greateſt degree that the reſt of the ſurgeons or myſelf had ever known; and as ſhe had formerly, while her toes were ſphacelated, taken vaſt quantities of the *cortex* and wine, yet had mended very ſlowly, ſhe was ordered to drink at pleaſure, from a quart to three pints, of the infuſion of malt, (according to Dr. Macbride) daily; and that the bad ſmell might not be injurious to any of the other patients, ſhe was ordered into the lazaretto. The very next day, the poultice had entirely ſuppreſſed the ſtench; and moreover, had ſubſtituted its own ſweet ſmell; the pain was conſiderably aſſuaged; the inflammation and ſwelling diminiſhed;

diminiſhed; ſhe was able to move her ancle, and moſt thankfully expreſſed, that ſhe had had a better night than for a year and a half before! In ſhort, from this time, the ichorous diſcharge changed for the better every day in colour, conſiſtence, and quantity, and in little more than a week, became very laudable; the hard inflamed lips ſoftened; the ſurface of the ulcer put on a healing appearance; the patient's conſtitution manifeſtly mended, and ſhe was diſcharged cured the twelfth of May following; in which time ſhe had taken no other medicine than the malt infuſion, nor had any other topical application beſides the carrot poultice, except when the ſore was contracted to the ſize of a ſhilling; then edgings of *cerat. alb.* were uſed along with it, becauſe, when the diſcharge was become ſmall, I thought the dryneſs of the poultice brought off with it ſome of the new cicatriſed ſkin. In fact, this application agreed ſo well with this ulcer, that what was meant at firſt only to remove the bad ſmell, anſwered fully every curative intention; I mean as a topic: and I have great reaſon to believe, that had we been able to have procured

procured carrots in perfection during the months of February and March, this cure would have been performed in much leſs time; for it was very obſervable, that when none but the old full-grown carrots could be bought, which were become leſs ſucculent by keeping, or the young ſpring ones with their juices leſs exalted, that the cure advanced more ſlowly; and poſſibly that might be the cauſe why we made no progreſs the laſt two months in the caſe of the ulcerated *penis* after ſuch promiſing appearances.

Upon the whole, I dare not pretend to aſſert, that a cataplaſm of carrots will cure an ulcerated cancer; but I dare advance, that it will ſubdue the *intolerable ſtench*, frequently attending foul, gangrenous cancerous ulcers, which has heretofore been no inconſiderable *deſideratum* in ſurgery, both in reſpect to the patients themſelves, and to the people who are about them.

Mr. Lambert, Mr. Keenlyſide, Mr. Stodart, my worthy friends and colleagues at the infirmary, were very attentive to the progreſs of this cure, and will bear teſtimony to what I have related concerning it.

To conclude, it appears from this hiſtory, that the ſubduing and conquering the bad ſmell, and abating the pain, were due to the *carrot poultice*; but that the correcting the patient's bad habit, may be attributed to the *malt infuſion*; and indeed, it ſeemed to agree wonderfully well with her; it kept her in a gentle laxative ſtate, uſually procuring her daily two ſtools. She was obſtructed before ſhe was admitted, and in the courſe of her recovery, ſhe became regular. In fine, ſhe improved in health every day from her being put upon this courſe, though, when my patient before, ſhe was more months in recovering under a courſe of the *cortex*, &c. than weeks at this time.

I have, in the courſe of this year, had three or four other ſcorbutic patients, with foul ulcers of long ſtanding, under this courſe of malt infuſion, with all of whom it agreed very well; it generally kept them in a gentle laxative ſtate, and apparently did them ſervice; but no one ſo clearly received benefit from it as the ſubject of the laſt related caſe; and I make no doubt, but

but in long voyages at ſea, where recent vegetables cannot be had, that it will prove a noble ſubſtitute, and fully anſwer the intention of the benevolent, humane, original propoſer of it.

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*An obſtinate Caſe, where the Carrot * Poultice as a Topic, and the Malt Infuſion as a Medicine, proved very efficacious.*

JOHN ARMSTRONG, about 36 years of age, was admitted into our infirmary the 22d of December, 1768. There appeared in his right groin an unequally hard tumour, about the ſize of an hen's egg, with an ulceration upon it, where, he told us, it had been opened by a ſurgeon in the country, about three weeks

* In the infirmary, we title this, the *cataplaſm. e dauco ſativo*, and the infuſion. *infuſum braſii*, for this reaſon, viz. to prevent the patients murmuring or harbouring a notion, that we order them merely for the ſake of frugality, or by way of trying experiments upon them.

before:

before: the circumjacent parts were livid and hard, to a pretty large extent, more eſpecially the upper part of the thigh, and the lower part of the *abdomen* on that ſide; the veins were varicoſe, both on the tumor and in its neighbourhood. He ſaid, that when the ſurgeon opened it, there was no diſcharge; but at preſent there was a large fœtid ichorous one. He had been afflicted about four months; he complained of much pain, and that he got little or no ſleep; and had a very pallid countenance. In ſhort, it had a very bad appearance, and did not look unlike a large malignant venereal bubo, which had been prematurely opened.

Upon the whole, from the ſituation of this tumor, *&c.* we were led to ſuſpect, and indeed to hope, that it might be venereal; though, upon queſtioning the man very ſtrictly, he ſolemnly proteſted, he had never been idly given, (that was his expreſſion,) for that he had, he believed, a very good wife and ſeveral children. Notwithſtanding this, it was thought adviſable to put him under a mercurial courſe: accordingly, a ſpitting was raiſed, and he drank with

freely of the *decoct. ſarſæ.* The topical applications were, ſometimes the common digeſtive, with the emollient poultice *è micis panis alb.* at other times, the *ung. album*, with the ſame poultice over all. This courſe, and theſe dreſſings, were continued about two months, during which time, the unfavourable ſymptoms increaſed upon us; the tumor put on a carcinomatous aſpect; the ulcer ſpread conſiderably; the varicoſe veins enlarged more; the pain increaſed, as did alſo the offenſive ſmell, &c.

Upon a conſultation with my colleagues at the infirmary, viz. Meſſrs. Lambert, Keenlyſide, and Stodart, we began to be very apprehenſive of the caſe being cancerous; and as the diſeaſe had been aggravated by the mercurials, it was determined to change the method. The *extractum cicutæ* was therefore ordered him, night and morning, and ſome of the leaves added to the poultice; but after a fortnight's trial, as there was no mitigation of pain, nor any alteration to the better, the *decoct. cort. peruv. cum elixir vitriol. acid.* were preſcribed, becauſe the ſurface of the ulcer was

covered with a looſe flabby *fungus*; and moreover, it bled very much; it was exquiſitely ſenſible, ſo that the poor man could ſcarce ſuffer it to be touched. At this time I ordered the poultice to be diſcontinued, and tried various applications, ſuch as edgings of *ceratum album*, *epulotic. ung. tripharmacum*, *ſaturnin.* &c. and in expectation of ſuppreſſing the bleeding, and checking the looſe luxuriant fleſh, the whole ſore was waſhed either with the *decoct. cortic. cum alumine*, or the *aq. cæruleæ (pharm. Lond.)* lowered with water, with lint dipped in it, and applied on the ulcer, and ſome of the abovementioned cerates or ointments over the whole. This courſe was purſued about ten weeks, without any ſigns of amendment; on the contrary, the diſeaſe gained ground upon us.

At this time, the whole groin, from the ſpine of the *ilium* to the middle of the *pubes*, was one continued ulcer; another ſmaller one on the thigh, about two inches below; the bloody ichorous diſcharge was conſiderable; the pain excruciating; the ſtench intolerable; the poor man quite weary of

his life. Under theſe circumſtances, (every thing which had been taken or had been applied having failed,) he was directed to drink at leaſt three pints of the malt infuſion daily, and to apply to the part itſelf nothing but the carrot poultice. It was equally pleaſing and wonderful, to find ſuch a change of the ulcer for the better in twenty-four hours time, ſolely by this dreſſing: The very diſagreeable ſmell was totally corrected; the man had paſſed an eaſier night than ſince his admiſſion, and from this time he grew ſenſibly better every day, though the carrots we were able to procure, having been kept the whole winter, were not remarkably good. Every ſucceſſive dreſſing, the ſore put on a better complection; in a few days it ceaſed bleeding; the diſcharge leſſened in quantity, thickened, and became laudable; the looſe *fungus* ſubſided to ruddy firm granulations; the margin turned white, and healed moſt favourably. After going on in this method about a fortnight, Dr. Lambert, the attending phyſician, recommended his being put under a * courſe of

* He was ordered one meal of water creſſes, &c: and generally two of radiſhes, &c. every day.

freſh vegetables, and then indeed, he mended moſt rapidly; for the cure was completed, after adopting the carrot application and malt infuſion, in about ſix weeks, as the patient was diſcharged cured the 29th of June.

I am afraid I have been too circumſtantial and too prolix in the hiſtory of this caſe; but I thought it in ſome meaſure neceſſary in recommendation of this new practice, to all ill-ſmelling ulcers with *large ſurfaces*, whether venereal, ſcorbutic, ſcrophulous, or cancerous, in which, I believe, it will ſeldom diſappoint the ſurgeons expectations.

I dare not yet ſay, that the carrot poultice will cure an ulcerated cancer, being afraid that that formidable diſeaſe will ſtill continue the *opprobrium medicorum*; but moſt certainly, until it put on an healing appearance and was cured, this caſe was deemed, by every ſurgeon who ſaw it, an ulcerated cancer. In fact, its having ſo many diſcriminating characteriſtic ſymptoms of that terrible diſtemper, and having reſiſted ſuch powerful *medicines*, &c. ſo long, is a ſufficient excuſe for forming ſuch an opinion;

opinion; but granting it to have been an obſtinate ſcorbutic ulcer, which, to ſpeak ingenuouſly, I now believe; yet ſtill the treatment which effected a cure after our having deſpaired of one, derives not a little credit from it; for which reaſon, I thought it might not be deemed altogether unworthy a place in your *Medical Obſervations*, which are ſo humanely and ſo happily calculated to communicate inſtruction for the relief of the very greateſt miſeries mankind are incident to.

XV. *Experiments on the* Cerumen *or Ear-wax, in order to diſcover the beſt Method of diſſolving it, when cauſing deafneſs, by Dr.* John Haygarth, *at* Cheſter; *communicated by Dr.* Watſon. *Read* Sept. 4. 1769.

EVERY one knows, that the ear-wax is of a dark brown colour. It remarkably adheres to any ſubſtance with which it comes in contact: this property, together with a great number of ſmall hairs, which are every where diſperſed through its ſubſtance, renders it extremely tenacious. Its taſte is bitter. A dilute ſyrup of violets is neither changed by it to a green or red colour; ſo that there does not ſeem to be a juſt foundation for the opinion of ſome authors, that it is of an *alkaline* nature, or of others, that it is acid.

Ear-wax, if put upon red-hot iron, or into the flame of a candle, will burn, though not quickly or completely. This experiment ſeems to prove, that ſome oily or fatty ſubſtance enters into its compoſition,

tion, as no other inflammable matter has been found to be ſecreted in that ſtate by the animal body. The fatty matter ſeems, however, to be in very ſmall proportion, from ſeveral of the following experiments.

Ear-wax, when firſt ſecreted, is of a thin conſiſtence; by the heat of the body its fluid particles evaporate, and the remainder gradually becomes harder; ſo that in old people, it is found extremely dry and hard.

Ear-wax is ſpecifically heavier than water, for it ſinks to the bottom when immerſed in that fluid.

It is well known, that *deafneſs* is frequently owing to the ear-wax obſtructing the *meatus auditorius externus*. Authors recommend a variety of injections, in order to clear the paſſage of the wax; but I do not know that any one has *experimentally* determined which kind of injections are the beſt. *Du Vernæy* recommends dropping oil into the ear, injecting warm water, *hydromel*, linſeed oil mixed with ſome drops of the ſpirit of wine, bile, *&c. &c.* He ſays, "That the wax ſometimes comes away in

" five days, and ſometimes in fifteen, which " plainly demonſtrates, that we ought not " to grow weary of injections." Part iii. page 120. Now, I apprehend, that many patients would be weary of injections before the fifteenth day; and conſequently, that ſome caſes, in their nature curable by proper injections, have remained without relief through the tedioufneſs of the proceſs, when improper ones were uſed. This being evidently the caſe, a method of diſſolving the ear wax moſt perfectly and ſafely, becomes an enquiry of importance: and here we are happily exempt from the objection commonly made to this kind of experiments; for we can apply the diſſolving liquor, unleſs it be of an acrid nature, to the wax itſelf in the ear. Hence we ſhall ſeldom be diſappointed in removing the ear-wax, which is, perhaps, the moſt *common* cauſe of curable deafneſs.

In the following experiments, I put about half a grain of ear-wax in about two or three tea-ſpoonfuls of each liquor, immerſing the glaſs which contained it into water of

of nearly the human heat, for an hour, unleſs otherwiſe mentioned.

WATER.

Exper. 1. The wax inſtantly became whiter, as ſoon as it came into contact with the *water*, and ſoon turned perfectly white. It ſeparated into a great number of ſmall particles, entirely unconnected with each other while at reſt, and when ſlightly agitated were uniformly diffuſed through the fluid.

ACIDS.

Exper. 2. *Vinegar* did not change the wax to a pure white, nor entirely ſeparate it into diſtinct particles, they being ſtill ſlightly connected by a ſlimy adheſion.

Exper. 3. *Vitriolic acid*, after *ſome days*, diſſolved ſo much of the ear-wax as to be changed into a dark brown colour; but the greateſt part of the wax remained harder than before immerſion.

Exper. 4. *Oxymel* neither changed the colour nor coheſion of the wax.

ALKALIES.

ALKALIES.

Exper. 5. *Lime-water* had nearly the ſame effect as common water.

Exper. 6. Water, in which two grains of the *ſalt* of *tartar* had been diſſolved, took away the brown colour of the wax; it put on a looſe granulated appearance, the particles being ſome of them ſeparated, but others connected by a kind of mucous or ſlimy adheſion.

Exper. 7. In the *lixivium ſaponarium*, though perfectly cauſtic, the wax remained in a compact form, and of a browniſh caſt; upon ſhaking, it ſeparated into particles; but of a larger ſize than thoſe in common water.

Exper. 8. In two tea-ſpoonfuls of water mixed with one of the ſame *ſoap-ley*, as was uſed in the laſt experiment, the wax appeared white and diſſolved on its ſurface; but there remained a *mucus* of a browniſh colour, and coherent, though leſs ſo than that in pure ſoap-ley.

NEUTRAL

NEUTRAL SALT.

Exper. 9. A ſcruple of nitre was diſſolved in three tea-ſpoonfuls of water. The particles of wax adhered to each other by a little ſlime or *mucus*.

SAPONACEOUS LIQUORS.

Exper. 10. About two grains of ſoap were diſſolved in about three tea-ſpoonfuls of water, ſo that it became white and opaque. The wax ſtill retained ſomething of its brown colour. The particles, as in the laſt experiment, were ſome of them connected by a mucous ſubſtance.

Exper. 11. With *ox's bile* the wax did not change its brown colour, perhaps becauſe the bile itſelf is brown. There was nearly the ſame appearance of *mucus* as in the two laſt experiments.

Bile may be eſteemed a ſaponaceous liquor from its chemical qualities, though not from its chemical compoſition.

INFLAMMABLES.

Exper. 12. Spirit of wine rendered the wax white. It ſtill adhered together in one piece,

piece, but ſeemed more friable than before immerſion.

Exper. 13. Oil of turpentine, of olives, and bitter almonds, were ſeparately tried. Neither the colour or tenacity of the wax were changed. I afterwards increaſed the heat of the water-bath to boiling, without any effect. The wax that had been immerſed in olive oil, was put into water; but it ſeemed to diſſolve it more ſlowly than when applied to wax freſh taken out of the ear, probably becauſe ſome particles of oil adhering to the ſurface of the wax prevented the action of water.

The common practice of dropping oil into the ear, before ſyringing it with watery liquors, appears, from this experiment, to be particularly improper.

It is obſervable, upon comparing the foregoing experiments, that none of the *menſtrua*, except water, diſſolved that *mucous* or *ſlimy ſubſtance*, which connects together the particles of ear-wax. Water alſo entirely deſtroys its brown colour, which appears to exiſt in this *mucus*, that is the cauſe of its adheſion and of its tenacity.

city. Other liquors ſeem to poſſeſs more of theſe effects, the nearer they approach to pure water.

From the united evidence of the preceding experiments, it appears, that water is the powerful ſolvent of the ear-wax; and the warmer this is applied, as far as the ear can bear it without injury, the more effectual the remedy.

If to this we add, that if larger ſyringes were made uſe of, a little more forcibly applied, and longer perſevered in, the ſucceſs of the operation would probably be more evident.

XVI. *Ob-*

XVI. *Obſervations on the Cure of an* Hæmoptoë, *and upon riding on Horſe-back for the cure of a* Phthiſis; *by* Thomas Dickſon, *M. D. F. R. S. and Phyſician to the* London *Hoſpital; in a Letter to the Medical Society.*

GENTLEMEN,

A SPITTING of blood is a much more common complaint in this country, than I believe is generally imagined; and when it arrives to any conſiderable height, and is long continued, uſually becomes the prelude to a conſumption, from which, in my opinion, very few indeed ever recover. I am not, however, to inform you, that in this age and place, men are to be found who talk of their cures of a conſumption with the utmoſt confidence; and which they performed too with much eaſe, by methods only known to themſelves. Is it not to be lamented, that theſe cures are chiefly imaginary, and only celebrated

celebrated from intereſted views, to impoſe on the credulous and ignorant? But to the point; a ſpitting of blood, which always greatly alarms the patient and thoſe about him, when the method which I ſhall mention is early purſued, is, in general, with little difficulty removed. The medicine, which I am to recommend, is neither new or uncommon; on the contrary, it is in moſt frequent uſe in the practice of phyſic, though ſeldom, as far as my knowledge extends, there is much ſtreſs laid upon it for the cure of this diſeaſe. But in this laſt point I may eaſily be miſtaken. However, though phyſicians ſhould be never ſo well informed of this method; yet, as the greateſt part of practitioners have only recourſe to ſtyptics, by which they are egregiouſly diſappointed, as I have often myſelf experienced, I think it my duty to turn their attention to what they will find much more efficacious. One great purpoſe of our publications being to communicate any thing found uſeful in practice, which, however generally adopted here, may be unknown

unknown in remote parts, induces me likewiſe to give you this paper.

The medicine which I have ſpoken of in ſuch high terms of praiſe, is only *nitre*, to the uſe of which I was directed by the late very learned and worthy Dr. Letherland, phyſician to St. Thomas's hoſpital. I had occaſion to conſult him for a *hectic* patient, who frequently brought up large quantities of blood, and had been attended along with me, by the late Dr. Schomberg, where every kind of reſtringent medicine had been tried in vain. Dr. Letherland, upon this conſultation gave me a very particular detail of his own caſe under this diſeaſe, and ſaid, that he had experienced no benefit from any thing, but from ſmall doſes of *nitre* very frequently repeated, and put me in mind that this was his practice at the hoſpital when I attended it; and added, that he conſtantly found the beſt effects from its uſe.

The *nitre* was adminiſtered to the patient abovementioned; but though I thought it did ſervice, yet, as the lungs were much affected, and a conſumption had made a great progreſs,

progreſs, I am well ſatisfied that nothing could have ſaved him. He, however, did not die of an *hæmorrhage*, which both Dr. Schomberg and I apprehended, from the great quantities of blood brought up at particular times. Immediately after this conſultation with Dr. Letherland, I was determined to make trials of *nitre* in this diſeaſe at the hoſpital; and as the moſt commodious form of uſing it, I ordered an electuary to be made in the proportion of four ounces of conſerve of red roſes, and a half ounce of *nitre*, of which the bulk of a large nutmeg was directed to be given, four, ſix, or eight times a day, according to the urgency of the caſe. The good effects from this electuary have aſtoniſhed me, and in ſo much, that, when given early in an *hæmoptoë*, I can almoſt equally depend upon it as upon the *cortex peruvianus* in a genuine intermittent. I muſt, however, obſerve, that whenever the pulſe is full and hard, and indeed almoſt always there is ſome degree of hardneſs in the pulſe in this malady, ſome blood is ordered to be taken away, which, in ſuch circumſtances,

I have always found to be ſizy. The bloodletting is occaſionally repeated.

In my conſultation with Dr. Letherland, I obſerved to him, that *nitre* ſeemed poſſeſſed of the power of abating heat and the ſtrength and frequency of the pulſe, beyond any medicine I was acquainted with; whence I inferred, that the rarefaction and *momentum* of the blood being thereby diminiſhed, the veſſels had an opportunity of recovering themſelves, ſo as to ſtop any further *hæmorrhage*. But to this the Doctor made anſwer, it might be ſo; but that he had only talked from experience.

A cool regimen, and quiet of body and mind, are certainly as uſeful in this diſeaſe, as in any whatſoever. When the cough is very troubleſome, a ſmall opiate frequently exhibited is abſolutely neceſſary.

I have found *nitre* too adminiſtered in this manner, of ſingular ſervice in uterine *hæmorrhages*; but only ſo far, if my obſervation is correct, where there was a feveriſhneſs and hardneſs of pulſe; for in other caſes, the *elix. vitr. acid.* given

in

in ſmall quantities, and very frequently repeated, was attended with much greater benefit.

Though I meant at my firſt ordering the forementioned electuary, that the conſerve of roſes ſhould only be conſidered as a vehicle for the nitre; yet I will by no means pretend to ſay that it is deſtitute of efficacy. In private practice, the *nitre* joined with *ſp. ceti*, or *p. è trag. c.* has produced equally good effects.

I have ſaid that *nitre*, or the electuary already mentioned, is almoſt as efficacious in an *hæmoptoë* as the *cort. peruv.* is againſt intermittents; but notwithſtanding the vaſt number of inſtances of good ſucceſs which I have ſeen; yet, when I think of the great Sydenham talking as highly of the benefit of riding on horſeback in conſumptions, I am afraid to truſt myſelf with making a ſingle obſervation on *any medicine whatſoever* *: for, if I can judge at all, I am

* Syd. Diſſ. epiſt. p. 383 and 384. Edit. Lond. 1705. Verbo dicam. Quantumcunque exitialis Phthiſis et ſit et audiat, utpote qua intereunt duo fere trientes omnium quos morbi chronici jugulant, hoc tamen ſanctè aſſero, quod

I am certain that riding on horſeback in conſumptive caſes, is moſt commonly hurtful, without ſuch regulations as in general have been little minded. For inſtance, I have known a perſon who, by a ride of an hour or two in the morning, was wonderfully recruited, and who, at another time, in the afternoon and evening, without undergoing more bodily motion, has returned faint and languid, and apparently worſe; and this obſervation on the ſame perſon has been ſo frequently made, as to point out evidently the times when this exerciſe ſhall not do hurt in conſumptive caſes. You are well acquainted how the pulſe, in the diſeaſe juſt referred to, however calm in the morning, becomes more frequent in the afternoon and night, attended with heat, and other feveriſh ſymptoms; wherefore exerciſe can only add to the miſchief of the fever. I would

neque mercurius in lue venereâ, neque cortex peruvianus in intermittentibus efficaciores extent, quam in phthiſi curanda exercitium jam laudatum, modo æger curet ut linteamina lecti probe fuerint arefacta, atque etiam ut ſatis longa itinera emetiantur, &c.

therefore

therefore recommend to all hectic perſons, and eſpecially to thoſe who ſhall travel to diſtant places on account of a better air, or the benefit expected from any particular water, that their travelling ſhould be ſlow, and confined to a very few hours, and *only* in the morning. From the neglect of this precaution, how many perſons have gone to Briſtol, and the next day, or in a few days, have made a very unexpected exit?

If you ſhould approve of this letter, and think it worthy of publication, I hope nobody will, from the reading of it, draw any concluſion againſt me for want of deference and reſpect to Dr. Sydenham, whoſe ſkill in his profeſſion, and candour, and elegance of ſtile, I venerate. I am,

GENTLEMEN,

Your moſt obedient humble ſervant,

THOMAS DICKSON.

## XVII. *Some Remarks on the Bills of Mortality in* London, *with an Account of a late Attempt to eſtabliſh an annual Bill for this Nation.*

### *To the* MEDICAL SOCIETY.

*December* 30, 1768.

GENTLEMEN,

THE clerk of the pariſh in which I reſide, having left at my houſe, the other day, the yearly bill of mortality for London, I peruſed it immediately with ſome attention.

If the following hiſtory and reflections relative to this ſubject, fall within the compaſs of your deſign, you may publiſh them if you pleaſe: and although they come from a nameleſs writer, you may be ſatisfied of the truth of the facts, by applying to your ſecretary, who will be informed from whom he received this communication.

About the year 1754, a phyſician in the city, who had for ſome time employed a part of his time in obſerving the ſtate of the weather, the concomitant diſeaſes, and taken ſome account of the weekly bills, applied to the company of pariſh-clerks in London, and acquainted them, that, to his certain knowledge, their weekly bills were defective in many reſpects; that the liſt of diſeaſes was a very injudicious one; that their preſent labours, therefore, anſwered very little uſeful purpoſe, either to themſelves or the community. However, that it ſeemed practicable to form a plan that would alike conduce to the advantage of their company, and to the intereſt and ſatisfaction of the nation in general.

A memorial on this ſubject was delivered to the company in form, ſetting forth the particular benefits hence to be expected. That, in reſpect to medicine, the increaſe or decreaſe of certain diſeaſes, at different times and places, would be both aſcertained, not only in this city, but throughout the kingdom; from whence much benefit might

be derived to the art of healing, as well as to the public.

That the increaſe or decreaſe of the people in general would be aſcertained; in time likewiſe their numbers.

That the increaſe of vice or virtue might alſo be traced by obſerving what proportion the diſeaſes proceeding from intemperance annually bore to the reſt; and likewiſe in what particular places this was obſervable.

That the firmeſt baſis of political arithmetic might be raiſed on this foundation, and that a work of extreme utility, on ſo many accounts, could not but redound to the benefit of thoſe who had the conduct of it.

The company, on conſidering the affair, thought the propoſal of ſo much conſequence, as to apply to parliament for powers ſufficient to carry this deſign into execution.

The baſis of this plan was, that not only the pariſhes within the bills of mortality, but all the pariſhes in England, ſhould be obliged to keep exact regiſters of BIRTHS, BURIALS,

BURIALS, and MARRIAGES, inſtead of *chriſtenings* and *burials* only, as the bills are at preſent. And that from the ſeveral pariſh regiſters, an annual regiſter ſhould be formed in each county, and tranſmitted to the capital, early enough to be incorporated into one general bill.

In order to render that part of this account which related to diſeaſes more advantageous, ſome phyſicians of eminence met together, and attentively conſidered the preſent liſt of diſtempers, rejected all ſynonymous and obſolete terms, and propoſed to give ſuch an explanation of thoſe that were retained, as might enable thoſe whoſe duty it might become to make report, to do it with much more preciſion than it has been done hitherto.

The affair was brought into parliament, and the bill was ordered to be printed, and ſeemed to be in a way to paſs very favourably.

Unfortunately, however, the gentleman * who undertook the conduct of this

* The late Thomas Potter, Eſq;

affair

affair in the Houſe of Commons, inſiſted on a clauſe being inſerted in the bill which totally overthrew the deſign, and was the principal cauſe of its being rejected by a great majority.

One motive that was urged by thoſe who were friends to the bill was, that it would furniſh the moſt perfect baſis yet extant for political calculations reſpecting inſurances on lives, and other circumſtances of apparent utility.

It was evident, that could the number of people be known, the foundation of ſuch computations would be laid more ſpeedily and certainly.

This induced the gentleman above-mentioned, to inſiſt on a clauſe for numbering the people of both ſexes and all ages, before the act took place. Thoſe who were not the friends of adminiſtration at that time, laid hold of this clauſe; nothing but the *ſin of David* was heard of, till the bill was laid aſide.

All this, perhaps, you will ſay, is little to the purpoſe of medical knowledge; but indulge me a few moments longer, and

ſhould

ſhould you ſtill be of the ſame opinion, I ſhall ceaſe to urge your admitting theſe remarks.

I know of nothing that would more effectually conduce to ſtate the different degrees of healthineſs or unhealthineſs in the different parts of this nation ſo clearly, as a proper bill of mortality; nor ſuggeſt the neceſſity, nor perhaps the means of ſecuring the firſt, or preventing the latter. The records of the ſeaſons, in reſpect to heat and cold, drineſs and moiſture, made by ingenious men in different parts of the kingdom, compared with ſuch annual bills, would afford many uſeful reflections to the faculty, much benefit to the community in general.

I have, therefore, thought it not improper to relate what ſteps have been taken in this affair, and by what means they were rendered ineffectual. Another ſeaſon may be more propitious; and ſhould you, gentlemen, approve the plan, your opinion, and aſſiſtance, I am perſuaded, would inſure ſucceſs.

Perhaps

Perhaps it will excite you the more readily to embark in this affair, when you recollect, that our country ſuffers much in the eſteem of foreigners by a grievous neglect in compoſing the preſent bills of mortality. If you will pleaſe to caſt an eye upon the article of *conſumption* in the yearly bill, you will perceive, that, in the preſent year, no leſs than 4379 out of 23,639 are ſaid to have died of this diſeaſe. From whence foreigners conclude, that the climate is ſo much diſpoſed to produce conſumptions, that it may juſtly be called unhealthy; a character it by no means deſerves.

You know that theſe bills are framed from the reports of common ſearchers appointed to view the dead bodies, in order to prevent the concealment of violence. Theſe ſearchers are, for the moſt part, ignorant poor women, who, if they ſee the body emaciated, immediately enter it in their report as conſumption. I need not inform you, how many chronic as well as long continued acute diſeaſes, in which the lungs are no otherwiſe affected than

than as ſuffering with all the other parts, waſte the whole frame, and bring it to the ſame ſtate as thoſe who died tabid; but theſe ought not to be ranked under conſumptions, but under the ſeveral heads to which they belong.

It was intended, among other ſalutary attempts, to reſcue our country from theſe unjuſt imputations, and to vindicate its character from the effects of ignorance and inattention. That many die of conſumptions is moſt certain; but by no means in the proportion alleged by theſe erroneous accounts. Perhaps the real number of thoſe who die of the genuine *phthiſis pulmonalis*, would not amount to a third part of the ſum, oppoſite to the article of conſumptions. I have been preſent where the reports of ſome of theſe common ſearchers have been produced, and know, that perſons who have died of mere old age, have been reported conſumptions. Children, waſted by glandular diſeaſes, without the leaſt ſymptom of a pulmonary affection, have been placed in the ſame catalogue, and others yet ſtill more remote from a

genuine conſumption, have been added to the liſt.

Theſe remarks, I acknowledge, do not directly tend to the cure of any diſeaſe, your immediate object; yet, as your obſervations, I find, are in the hands of many learned men abroad, theſe hints may tend to correct an error relating to the hiſtory of our climate, which has to our coſt been received, if I am not miſinformed, by many ingenious foreigners, and propagated in their writings to our diſadvantage.

I am, &c.

*XVII. *Caſe of a fatal Ileus, by* M. Garthſhore, *M. D. Communicated by* Richard Huck, *M. D. F. R. S. Phyſician to* St. Thomas's *Hoſpital.*

VARIOUS are the cauſes that give riſe to the *iliac* paſſion; but there is generally ſuch a ſimilarity in the ſymptoms of this dreadful diſeaſe, that it is often a matter of the utmoſt difficulty, and frequently impoſſible to diſtinguiſh and trace out the true cauſe.

The following hiſtory will ſerve to illuſtrate this aſſertion.

*Mary Long*, a healthy girl, aged twenty-one, on the eighth of April, 1768, had her *menſes* at the uſual period, which ſtopped the next day, without her being able to aſſign any cauſe for it. On the tenth, ſhe complained of colic pains, which increaſing at night, were accompanied with vomitings. On the twelfth and thirteenth, her apothecary bled her twice, and gave her purging medicines and clyſters, but without alleviating the ſymptoms, or procuring

curing a ſtool. On the fourteenth, at night, being deſired to ſee her, I intreated the favour of Dr. *Huck* to viſit her with me.

We found her in great torture, with the *abdomen* much ſwollen, and were very ſenſible of a particular hardneſs, and oblong tumor a little below the navel on the right ſide, where ſhe complained of great pain. There was no appearance of this tumor the next day. Notwithſtanding the ſevere pains which ſhe felt, ſhe had neither great heat nor thirſt. Her pulſe was quick. The hiccup and inceſſant vomitings deprived her entirely of reſt.

Bleedings, anodyne embrocations, fomentations, the warm bath, laxative, oily, and purging medicines by the mouth, emollient, ſtimulating, and even tobacco-ſmoke clyſters, were adminiſtered, but without procuring relief. She died on the ſixteenth, after extreme ſufferings, particularly ſome hours before death.

The next day, the body was opened by Mr. *Barrow*, in the preſence of Dr. *Huck*, Mr. *John Hunter*, and myſelf. In the cavity

cavity of the *abdomen* was found floating ſome quantity of a dirty-coloured fluid.

The *jejunum* and *ileon* were greatly diſtended with air. A portion of the *omentum* adhered to the meſentery, near that part where the *ileon* terminates in the *cæcum*. From this adheſion, which was cloſe to the *ſpine*, there ran a ligamentous cord or proceſs, about two inches and an half long, unequally thick, in ſome places not thicker than a packthread, which by its other extremity adhered to the coats of the *ileon*, about two inches above the *cæcum*. This cord formed a circle with the *meſentery*, large enough to admit a hen's egg to paſs through it. It is difficult to ſay in what manner it had happened; but the cord had formed a nooſe, which included a doubling of about two inches of the lower end of the *ileon*, and was drawn ſo tight, that it not only put a ſtop to the paſſage of every thing through the bowels, and brought on a gangrene of the ſtrangulated part, but it had even cut through all the coats of the *inteſtine*, on the oppoſite ſide to the *meſentery*, and had made an

aperture about an inch long, as is expreſſed in the plates.

Plate I. gives a view of the *inteſtine* engaged in the proceſs or cord.

Plate II. ſhews the cord after the perforated *inteſtine* was diſengaged from it.

The dirty-coloured fluid, of which we took notice on opening the *abdomen*, had probably eſcaped through this aperture of the inteſtine, and ſeemed to be part of the liquors and medicines which ſhe had taken.

As this cord was attached by one end to the *meſentery*, at a part to which the *omentum* adhered, and by the other to the *ileon*, Mr. *Hunter* imagined, that it might have been originally formed by an adheſion of the *omentum* to both the *meſentery* and the *ileon*. He has ſince ſhewn me two ligamentous proceſſes ſomewhat ſimilar, only more uniform in their appearance. The one was attached by its extremities to two different parts of the ſame *inteſtine*; the other, to the *inteſtine* and to the *meſentery*. As there were in both caſes evident marks of preceding inflammation, it is probable that they were formed

formed firſt by an inflammatory adheſion of the parts, and then by a ſubſequent diſtraction and ſtretching, occaſioned by the periſtaltic motion of the inteſtines, and by exerciſe.

In very deſperate caſes of the *ileus*, it has been recommended by ſome ancient authors *, to make an opening into the cavity of the *abdomen*, in order to diſcover, and to diſengage the ſtrangulated *inteſtine*; and ſome few hiſtories ‡ are recorded which ſeem to favour this practice. It is evident that our patient could have been ſaved by an operation of this kind only, and that too performed early in the diſeaſe.

But what are the ſymptoms by which we may be enabled to diſtinguiſh this particular cauſe of the *ileus?* We had only ſuch in our patient as appear in every ſevere *iliac* paſſion, where ſimple inflammation inverts the periſtaltic motion of the *inteſtines*, and produces vomitings with conſtipation,

* Praxagoras. Vide Le Clerc hiſtoire de la medicine, prem. partie, liv. x. chap. 6. Paul Barbette.

‡ Ooſterdyk Schaacht.

Bonet. Sepulchr. ed. opt. lib. iii. ſect. 14.

though the inteſtinal canal may continue all the while pervious.

Was the tumor on the right ſide of the *abdomen*, when we firſt ſaw her, an indication of obſtruction from this cauſe? Was the diſappearance of this tumor the next day, owing to the perforation of the *inteſtine* ſuffering *flatus*, &c. to eſcape? How greatly may we lament the want of ſuch ſymptoms as would teach us to diſtinguiſh this cauſe of the diſeaſe? And, until we know ſuch as point it out with preciſion, we ſhall not be warranted in recommending ſo painful and hazardous an operation as *gaſtrotomy*.

Though this was an uncommon, it was not a ſingular caſe. In the 3d and 4th vols. of the Memoirs of the French Academy of Surgery, are related four caſes of the *ileus*, owing to ſtrangulation from membranous cords. The one, the moſt ſimilar to ours, is that communicated by Monſieur *Moſcati*, in the 3d vol. with an engraving of the diſeaſed *inteſtine*. The ligamentous cord adhered by its extremities

to

to the *meſentery*, and to the coats of the *ileon*, as ours did; it was twiſted round two arches or doublings of that *inteſtine*, and thus produced a double ſtrangulation. The three other hiſtories in the 4th volume, are communicated by Monſ. *Duvignan*, *de la Faye*, and *Maillé*; but there is not one ſymptom related in any of them, which can any how enable us to detect this cauſe of the *ileus*.

Monſ. *Duvignan* alone mentions a ſmall tender ſwelling on the right ſide of the navel, exactly ſimilar in ſituation to that deſcribed in our patient. Monſ. *Hevin*, in his Hiſtorical Inquiry into the different Cauſes of the *Volvulus*, and how far *gaſtrotomy* is practicable and warrantable, after ſhewing the impoſſibility of ſucceſs in ſome, and the great uncertainty in all, introduces the four caſes juſt mentioned, with the following remarks:

" The ſtrangulation formed by a bridle, " which ties the inteſtinal canal like a real " ligature, could it be known, would at " once determine us to perform *gaſtrotomy*

" at that part of the *abdomen* pointed out " by the ſeat of the pain which preceded " the vomiting: as in ſuch a caſe nothing " but cutting this ligature can ſave the life " of the patient. But unfortunately (adds " he) we have not one ſign whereby we " can diſtinguiſh this very uncommon " cauſe, the moſt ſo, certainly, of all that " variety which gives riſe to the *iliac* " paſſion *."

The above remarks are equally applicable to that no leſs obſcure, ſingular, and fatal ſtrangulation occaſioned by the *inteſtine* paſſing through a perforation of the *meſentery*, as deſcribed by Monſ. *Saucerotte* †, or through the *meſocalon*, as deſcribed by Profeſſor *De Haen* ‡.

* Memoire de l'Academie Royale de Chyrurgie, tom. iv. p. 235.

† Ibid. p. 239.

‡ De Haen ratio medendi, pars xi.

XVIII. *Re-*

XVIII. *Remarks on the Uſe of Balſams in the Cure of Conſumptions, by* J. Fothergill, *M. D. F. R. S. Read* 16*th* October, 1769.

*To the* MEDICAL SOCIETY *in London.*

GENTLEMEN,

SO much has already been ſaid by different Authors on the ſubject of conſumptions, and the hiſtory, progreſs, and uſual methods of treatment, are ſo well known, that it may ſeem almoſt preſumption to offer any remarks to you upon this diſeaſe. And indeed ſome apology may be neceſſary when I acquaint you, that I have no new method of cure to propoſe, nothing, I fear, that will conduce more effectually to the relief of this diſtemper, than the remedies you are already acquainted with. My view in ſubmitting theſe remarks to your conſideration, and if not diſapproved by you to the public, chiefly aims at preventing inconveniences that may ariſe to conſumptive patients by

the uſe of ſome medicines vulgarly applied to the cure of pulmonary diſeaſes, and which, under certain circumſtances, are not only unſuitable, but frequently injurious.

An idea that all balſams are healing, and that in all ulcers, not excepting thoſe of the lungs, they are indicated, has ſo greatly prevailed, that to doubt of its propriety, would ſeem to betray a want of phyſical knowledge. Yet I cannot but ſuſpect, nay, more than ſuſpect, that this idea has been the means of precipitating too many of theſe unhappy invalids prematurely to their grave.

The term *balſamic*, I own, includes a vaſt variety of different ſubſtances. A ſolution of *ſperma ceti*, nay, ſometimes oil mixed with water, by the means of a mucilage, is ſtiled by ſome a balſamic, as well as a ſolution of balſam of *peru*, *copaivi*, *olibanum*, and other heating reſinous bodies: but there is a vaſt difference between theſe. The former, if free from rancidity, are properly emulſions and antacrid. The latter are literally balſamics, all of which are more or leſs pungent and acrimonious.

Let

Let us juſt take a view of the principal articles of this kind in the *materia medica*, as they are ranged in the *Pharmacopœia*. They are chiefly the following: *Balſamum copaiva,—peruvianum,—tolutanum,—benzoinum,—gummi ammoniacum,—myrrha,—olibanum,—opobalſamum,—ſtyrax,—terebinthina.* The officinal preparations are, *balſamum locatelli,—ſulphuris,—terebinthinæ—traumaticum.* Some others I may perhaps have overlooked, but excepting the *guiacum*, *maſtiche* and *balſamum guiacicum*, I think I have ſeen, at one time or other, all the reſt made uſe of, and in full doſes, in the cure of conſumptive diſeaſes, where, if it was not evident, there was at leaſt ſtrong reaſon to ſuſpect the lungs were ulcerated.

For the ſenſible qualities of theſe ſubſtances, I ſhall appeal to Dr. Lewis's hiſtory of the *materia medica*, and to the ſubſtances themſelves, and from thence endeavour to point out the effects they are moſt likely to produce on the human body.

*Balſamum copaiva*, ſays Dr. Lewis, has a bitteriſh biting taſte, not very intenſe, but durable

durable in the mouth; and quotes Fuller as aſſerting it to be manifeſtly warm and bitter; and that it purges when taken in a large doſe, *viz.* two or three drams. This medicine, however, Fuller recommends in dry deep coughs, coughing up of blood and pus.

*Balſamum peruvianum*; a very hot pungent taſte: it is one of the hotteſt of the natural balſams.

*Balſamum tolutanum* has an agreeable warm ſweetiſh taſte, very ſlightly pungent, and not accompanied like that of moſt of the other balſams, with any nauſeous reliſh.

*Benzoin* has very little taſte, impreſſing on the palate only a ſlight ſweetneſs: it imparts by digeſtion to water, a ſlight pungency.

*Ammoniacum* has a nauſeous ſweetiſh taſte, which is followed by a bitter one.

*Myrrha*; a lightly pungent, very bitter taſte; nauſeous on the palate.

*Olibanum*; a bitteriſh ſomewhat pungent taſte.

*Opobalſamum*; a bitter, acrid, aſtringent taſte,

*Styrax*;

*Styrax*; of a mild taſte, of no great heat or pungency.

*Terebinthina chia*; of a warm pungent bitteriſh taſte.—All the turpentines are hot, ſtimulating corroborants or detergents. So far Dr. Lewis.

*Balſamum locatelli* is compoſed of oil, two parts, turpentine and wax, each one part; it participates therefore of the qualities of the turpentine increaſed by heat. The red ſanders only give it colour, and ſome little ſmell.

*Balſamum ſulphuris* is a pungent acrimonious liquor, if made from ſulphur only; but when it is made either with oil of aniſe-ſeeds or turpentine, the heat and acrimony are much increaſed.

*Balſamum traumaticum* is a tincture of *benzoin*, *ſtyrax*, *balſam* of *tolu*, and *ſocotorine aloes* in ſpirits of wine. From the nature of the ingredients and the *menſtruum*, it is evidently heating.

An opinion ſeems to have prevailed amongſt mankind univerſally, that theſe kind of gummi-reſinous ſubſtances applied externally,

externally, promoted the healing of wounds and ulcers without exception. They early found, that it was neceſſary, in order to heal, to defend the parts affected from the external air. That the juices of plants alone, were inſufficient to form a plaſtic body; that unctuous applications eaſily melted, but that theſe tenacious yet pliant bodies afforded the moſt laſting defence. By degrees they apprehended that each balſam was endued with diſtinct properties. Hence they began to form numerous compoſitions, plaiſters, balſams, ointments, without end, which a more enlightened ſurgery has at length greatly diminiſhed.

Remedies which appeared to aſſiſt in healing wounds externally, were ſoon apprehended to have ſimilar effects internally adminiſtered in diſeaſes proceeding from, or attended with ulcerations, or in wounds of any internal parts: and this apprehenſion ſeems to have introduced theſe and many other ſubſtances ſuppoſed to be poſſeſſed of balſamic qualities into the train of phthiſical remedies, in all degrees, and all conditions of the diſtemper. That this is the fact,

fact, I doubt not but you are, from your own obſervations, very fully convinced.

It will be neceſſary to examine with what propriety theſe ideas have been adopted: Let us begin with obſerving what effects theſe medicines have when applied externally; trace them cautiouſly in internal application, and then endeavour to judge impartially of their real virtues.

Balſamics and vulneraries are nearly allied in our conceptions of theſe bodies. Subſtances that warm and ſtimulate the ſolids, and prevent a tendency to putreſcency in the juices. A little heat, ſome ſmall ſtypticity, ſomething agglutinant, muſt all concur. And theſe are moſtly united in the balſams. Some containing more, ſome leſs of theſe reſpective properties.

If, in an inflamed ſtate of an ulcer, in a young and vigorous conſtitution, a warm ſtimulating gummy-reſin is applied, pain, heat, inflammation will enſue, fluxion to the pained part will be great, a very conſiderable diſcharge will follow, conſiſting of the juices emitted from the wounded veſſels, and the veſſels themſelves diſſolved

diſſolved by heat and putreſcence. If theſe are exceſſive, the detriment to the ſick will be in proportion to the degree of the diſcharge and the part affected. The ſame medicines applied to a cold, ſerous, phlegmatical habit, in an advanced age, will be juſt ſufficient perhaps to produce ſuch effects as would be deemed perfectly ſalutary; that is, bring on a proper digeſtion, the foundation of a perfect cure.

In properly tempering the heat and ſtimulating qualities of balſamic applications, and adjuſting them to the age, habit, and qualities of the patient, conſiſts no ſmall part of the ſkill neceſſary in this part of ſurgery; as I believe will be allowed by the moſt experienced of that faculty.

Suppoſing that theſe remedies have ſimilar effects when internally exhibited, what are phyſicians to expect from medicines endued with theſe properties in ulcerations of the lungs?

If they may be ſuppoſed to paſs the ſtomach, and other offices of digeſtion unaltered, will they not produce the like effects? Certainly they will. They will ſtimulate;

ſtimulate; and this, in a great degree, in proportion to their ſenſible qualities: For we know of very few ſubſtances that diſcover much activity on the organs of ſmell and taſte, which do not quicken the pulſe; and whatever quickens the pulſe, occaſions a quicker tranſit of the blood through the lungs; and conſequently, the motion of this organ is more frequently reiterated.

If the medicine can be ſuppoſed to have any ſpecific effect on the diſeaſed part, it muſt be to produce the effects already enumerated. If the ſubject is young and vigorous, the diſcharge of fluids, and diſſolution of the ſolids will be in proportion to the activity and heat of the medicine, and the temperament of the ſufferer.

I am not more averſe to ſpeculative diſquiſitions, which have only for their object the eſtabliſhment of an opinion, than you are. But I perſuade myſelf you will have patience with me in theſe reſearches. It requires perhaps much more abilities than I am maſter of, to eradicate even a trifling error once received: But this I think of ſome magnitude.

It ſeems not improbable, but that an opinion of ſome healing qualities reſident in this claſs of medicines, may have been ſtrongly impreſſed on the minds of many perſons who practiſe phyſic, from the injudicious encomiums given of many ſuch kind of drugs and compoſitions, by ſome of the diſpenſatory writers. Fuller's commendation of the balſam of *copaivi* in ſuch a tendency to inflammation, as muſt certainly accompany a dry deep cough, or coughing up of blood and pus, muſt undoubtedly have made ſuch impreſſions, and may ſerve as one inſtance, among many others that might be adduced, of the dangerous tendency of indiſcriminate praiſe. I do not produce this inſtance of Fuller's, mentioned by Dr. Lewis, as including this gentleman in the cenſure. Dr. Lewis produces it only as Fuller's doctrine, which moſt certainly deſerves reprehenſion, as a medicine ſo pungent and heating, cannot be ſuppoſed ſafe, much leſs beneficial, in a diſeaſe that requires a very different treatment.

From an attentive conſideration of the manner in which this claſs of medicines has probably been introduced into the cure of pulmonary diſeaſes, it ſeems to me, that an opinion of their virtues and efficacy in healing external wounds and ulcers, opened a way for their admiſſion internally for ſimilar purpoſes; but how well or ill this opinion is founded, that medicines capable of heating, ſtimulating, quickening the pulſe, are likely to abate heat, and leſſen irritation, upon which the healing of all internal ulcers greatly depend, I think will appear from the preceding remarks.

And if we take a conciſe view of the riſe and progreſs of the *phthiſis pulmonalis* we ſhall perhaps be more confirmed in our ſentiments, that all medicines poſſeſſed of heating ſtimulating qualities, are in general improper in the treatment of it.

This diſeaſe, for the moſt part, takes its riſe from ſome accidental cold occaſioning a cough. This cough neglected, by its frequency and force, confirmed the inflammatory tendency that firſt ſeized

ſome particular point of the lungs. Theſe ſymptoms being neither attended with pain, much fever, or loſs of appetite or ſtrength at firſt, are ſtill farther neglected, till by their violence, ſome portion of the lungs is ſo far affected, as to become unfit for the uſe of circulation; the inflamed veſſels being either diſſolvéd into pus, or forming with the juices they contain a *ſcirrhus*, or other immoveable obſtruction.

If this obſtruction is ſmall, perhaps it remains without much increaſe, if proper care is taken, during the patient's life. If it is large, and a conſiderable portion of the lungs is affected, the diſeaſe is every moment increaſed, whether it be inflammation tending to ſuppuration, or to form a ſcirrhous hardneſs, and thereby rendering a portion of the lungs impervious: For as the ſame quantity of blood muſt neceſſarily paſs through the lungs, now a part is obſtructed, as was wont to do in time of health through the whole, it is eaſy to conceive, that the action and reaction of the fluids and ſolids, muſt be increaſed more than conſiſts with the ſafety of this organ;

organ; and this in proportion to the extent and ſituation of the part affected.

And hence in part proceed thoſe fluſhings in the cheeks, that heat in the palms of the hands, or feet, or both, which are generally perceptible in conſumptive perſons, in the early periods of this diſtemper; and which accompany them throughout, only as they ſeem at length obliterated by more grievous ſufferings.

I omit to take notice of the many other cauſes that produce conſumptions: For when once a ſingle point of the lungs is obſtructed, or the ſmalleſt ulcer formed, the diſeaſe becomes alike formidable, the age and habit of the patient, and the degree of inflammation or ulceration being the ſame, whatever may be the cauſe.

If then, from the firſt beginning of this diſeaſe to its concluſion, the *momentum* of the blood in the lungs becomes greater in proportion to the obſtruction, and that the effect of this increaſed *momentum* is an increaſe of the obſtruction; and as the medicines above-mentioned have a tendency, ſome more ſome leſs, according to their

different degrees of activity, to increaſe this *momentum*, ought we not to be extremely diffident in applying them in ſuch caſes, by whatever authority they are recommended?

Perhaps it will be alleged, that balſams, in certain ſtages of this diſeaſe, eſpecially where there is a manifeſt ulceration, and great quantities of pus are formed, muſt be of uſe as antiſeptics. I will not deny but they may be poſſeſſed of this property, as moſt heating aromatics and bitters ſeem to be. But ſuppoſing the whole of this antiſeptic efficacy could be conveyed unimpaired to the part affected through all the changes they are liable to in the courſe of digeſtion, ſtill they would be active ſtimulants; and whatever effect they might have on the juices, would ſtimulate the ſolids to more frequent and injurious contractions.

It is moſt probable, however, that much of this heating quality is expended before it reaches the part affected; whilſt it is evident, that moſt, if not all the ſtimulating tribe of medicines, whatever effect they produce on certain parts, as the *cantha-*

*rides*

*rides* on the urinary paſſages; yet exert a part of their active qualities on the nerves near which they paſs, ſo as in ſome degree to accelerate the motion of the blood.

Should it be farther alleged, that reaſoning is in vain where many facts, much authority, and general uſage is againſt me, I admit the full force of this allegation; allow that many facts as ſtrong as Fuller's may perhaps be produced. But as I well know the difficulty of aſcertaining the effect of any medicine by juſt experiments, I cannot but doubt at leaſt of the inferences, when my own ſenſes and diſpaſſionate reaſoning are againſt them. I am not unacquainted with the influence of general prejudice, nor with the difficulties that oppoſe themſelves to us, in endeavouring to ſurmount them. Early prepoſſeſſions confirmed by general conformity of opinion, in favour of balſams, cannot ſoon be changed or eradicated.

All that I hope for from this eſſay, is, to put young practitioners upon their guard in reſpect to theſe kind of medicines in the treatment of conſumptions. I think I have

ſeen much detriment ariſing from them, and very ſeldom any benefit. I believe the practice was firſt adopted on miſtaken principles, and followed too generally without conſideration. And it ſeems not improbable, but the ancient practice of embalming, which is ſuppoſed to have been principally performed by the means of balſams, may have contributed not a little towards eſtabliſhing a general prepoſſeſſion in their favours, and that many might infer from their efficacy in preſerving dead bodies, they were endued with properties capable of preventing the corruption or decay of the living.

## XIX. *A Defence of* Sydenham's *Method of treating the Meaſles. By* Thomas Dickſon, *M. D. F. R. S.* &c.

WHEN a medical writer, whoſe candour and ſkill have obtained great credit with the public, is attacked for not having rightly underſtood the nature and treatment of any diſeaſe, which he has deſcribed; it becomes our duty to inveſtigate the merits of ſuch accuſation: For otherwiſe, by ſupinely admitting it, a ſuſpicion will naturally ariſe againſt every other part of his works which have not been ſo critically examined. But this duty becomes ſtill more requiſite if another man of great eminence ſhall be the accuſer, plume himſelf with the other's feathers, and be able to perſuade the world that they are his own. I mean to apply what has been ſaid to Dr. *Mead*, who, in my opinion, has unwarrantably cenſured *Sydenham*'s practice with regard to blood-letting in the cure of the meaſles, and unjuſtly gained reputation at

*Sydenham*'s expence. At the ſame time, however, that I endeavour to juſtify *Sydenham*'s practice, I wiſh to ſteer clear of offending againſt the memory of ſuch an elegant writer as Dr. *Mead*, whoſe manners and liberality added dignity to his profeſſion.

*Sydenham* and *Mead* expreſs themſelves ſo clearly that I ſhall endeavour to quote their own words as much as poſſible without tranſlating them. The charge brought againſt *Sydenham* by *Mead* (*L. de Variolis & Morbillis*, c. vi. p. 89 and 90.) is as follows: "Sæpè igitur mirari ſoleo ſagaciſſimum atque experientiſſimum, quem ſæpiùs laudavi medicum non præcepiſſe, ut in *ipſo ſtatim morbi principio* detraheretur ſanguis, hanc vero medicinam *ita neglexiſſe*, ut *ſub finem morbi ſolùm* ubi regimen et medicamenta calidiora ſpirandi difficultatem ac tuſſim intuliſſent, adhiberet. . . . . Sed magnus alioquin vir *venia* dignus *videtur*, quoniam *iis temporibus* a ſanguinis miſſione in febribus iſtis, quæ conjuncta ſecum ferunt *exanthemata*, idque maximè *in pueris*, quos præcipuè corripit *hoc genus* ægritudinis *medici abhorrebant*, ne ſcilicet ea *depletio* eruptioni

eruptioni per cutim faciendæ obſtaret. At metum iſtum *vanum* fuiſſe ex eo apparet, quod rem longe ſecus evenire certiſſimum eſt."

Before anſwering the various charges againſt *Sydenham* in this quotation, of not ordering blood-letting in the beginning of the diſeaſe, of neglecting it ſo much that he only preſcribed it towards the end, when a hot regimen had brought on a difficulty of breathing, *&c.* I beg leave to premiſe one thing, that blood-letting does by no means appear to have been neceſſary in the epidemic of 1670; for *Sydenham*, after deſcribing the cooling regimen, which he directed, expreſsly ſays, "*rariſſime* perit qui *hoc* utitur *regimine*," *Syd.* op. ed. 1676. p. 276. In the epidemic meaſles of 1674, which were anomalous, and appear to have been of a more inflammatory kind, *Sydenham* gives an account, p. 238. of ſix or ſeven of the Counteſs of *Saliſbury*'s children paſſing eaſily through them without bleeding, and mentions this as an example of his general method. Wherefore then is *Sydenham* to be blamed becauſe he did not order blood to

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be taken away from his patients when they recovered eaſily without it?

It is not however true, that *Sydenham* neglected blood-letting ſo much in this diſeaſe as Dr. *Mead* imagined, for the caſe of Mrs. *Barrington*'s ſervant ſhews the contrary, "Quod (p. 279.) de horum ſymptomatum morbillis *decedentibus* ſupervenientium curatione jam diximus, nonnunquam eiſdem *florentibus* poteſt competere, ſi nimirum artificiali ſi fas eſt dicere et adſcititio calori ea debeantur. Hoc anno 1670 famulam Dominæ *Annæ Barrington*, hoc morbo *laborantem*, unà cum febre, dyſpnœa, *maculiſque purpureis* corpus omne deturpantibus, aliiſque ſymptomatis quamplurimis periculoſiſſimis medicus inviſebam; cum regimini et medicamentis, quæ ſatis multa uſurpaverat, calidioribus iſta omnia tribuerem, *ſanguinem è Brachio extrahendum curavi*, et ptiſanam pectoralem atque refrigerantem ſæpe aſſumendam præſcripſi, quorum ope et regiminis ſimul temperatioris et *maculae* atque alia omnia ſymptomata pedetentim evaneſcebant."

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The apology which Dr. *Mead* makes for *Sydenham*'s having neglected bleeding early in this diſeaſe, is very wonderful. See the above quotation from Dr. *Mead*, where he aſcribes the cauſe of this neglect to the great averſion of phyſicians *at that time* to take away blood, and eſpecially *from children*, in *eruptive* fevers. The reaſon here aſſigned is ſo unjuſt, as will immediately be ſhewn, that I muſt apologize for Dr. *Mead*'s error, by ſuppoſing that he wrote from memory, which, at the time of life when he wrote this book, might moſt likely fail him. *Sydenham* was ſo little tainted with the prejudices which any of his contemporary phyſicians might entertain againſt bleeding of children, and in *eruptive* fevers too, that he takes very great pains to obviate them, even in his Hiſtory of the Meaſles. The following quotations will put this matter beyond any ſhadow of a doubt. "Si autem (*Syd.* op. p. 277 and 278) æger à cardiacorum vel regiminis juſto calidiorum uſu, vel *morbillis adhuc vigentibus*, vel poſt eorum diſceſſum (quod magis eſt familiare) febre

febre vehementi atque dyſpnœâ, aliiſque accidentibus, qualia *peripneumonicos* ſolent affligere, in vitæ diſcrimen adducatur, feliciſſimo *ſemper* eventu, vel *tenerrimorum infantum venas* in Brachio ſecui, eductâ eâ ſanguinis quantitate, quam ætas vireſque indicarent. Quandoque etiam *urgente* morbo *phlebotomiam iterare* haud ſum veritus. Profecto haud paucos *infantes* hoc ſtatim ſymptomate enecandos . . . . miſſo ſanguine eripui. *Infantibus* autem accidit illud poſt morbillorum receſſum, quibus ita eſt exitiale, ut inter præcipuos parcarum miniſtros jure habeatur, plures jugulans quam vel ipſæ Variolæ; necdum mihi viſus eſt, qui *certa aliâ methodo eidem potuit occurrere.* Quin et diarrhœa, quam morbillos excipere diximus, venæſectione pariter ſanatur.——Neque eſt cur quis miretur me in teneris *infantibus*, venæſectionem inſtituendam ſuadere, cum ſanguis quantum ego hactenus potuerim obſervare, *haud minus tutò* ex eorum venis, quam ex adultorum extrahatur. Et profecto ita eſt illa *neceſſaria*, ut nec ſymptomati memorato, nec aliis quibuſdam quæ *infantibus* accidere ſolent,

ſolent, *omiſſa phlebotomia* certò mederi valeamus, *&c.*"

Every perſon muſt, I think, now be convinced that *Sydenham* would have ordered blood-letting in *every caſe and ſtage of the meaſles*, where it could be uſeful, and without any regard to the *age* of the patient. It is well known too, that he did not ſcruple to bleed in the ſmall-pox at the beginning when he ſaw occaſion for it, and in the introduction to the account of his method of cure of the meaſles, informs us that they are to be treated much in the ſame way with the ſmall-pox.

I heartily wiſh that Dr. *Mead* had omitted the following ſtory, as it tends to leave an impreſſion on his reader that is unjuſt and unfavourable to the great *Sydenham*. "Vereor *(Mead de Var. et Morbill.* p. 94. ed. 1747.) profecto ne famam aucupari videar narratione ſequenti; liceat tamen mihi, quoniam ad rem facit et *priora confirmat*, illam exponere. Annis fere quadraginta abhinc graſſabantur in urbe noſtrâ morbilli, ita ut ipſis variolis eſſent perniciоſiores. Convenit me tunc temporis medicus

dicus quidam celeberrimus, rogans ut quam tenerem in hoc morbo medendi viam vellem cum ipſo communicare. Quæro igitur num ſanguinem detrahi juſſiſſet? Minimè reſpondet, *nam rariſſimè id fecit Sydenhamus.* Quare ut ſemper in principio, vel ſi ſerius advocaretur, primo quoque tempore ſecari venam juberet, ſuadeo. Peripneumoniam enim, inquam, conjunctam ſecum fert hic morbus, cui *non alia via occurri poſſe* ipſe optimè ſciret. Non ita multo poſt acceſſit ad me gratias agens pro conſilio, ſeque *omnes ad unum*, quos hoc modo curaſſet, periculo eripuiſſe affirmans. Ex illo tempore ita increbuit iſta medicina ut etiam pharmacopœis noſtris benè nota ſit."

From the preceding narration, I ſuppoſe, it is that Dr. *Taylor*, in his Elogium of Dr. *Mead (Orat. Harv.* p. 28.) ſays, that *Mead* was the firſt perſon who diſcovered the meaſles to be of the *peripneumonic* genus, and in a note p. 64 adds, that *Sydenham* did not ſufficiently underſtand *this diſeaſe.* A formal refutation of this bold aſſertion

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of Dr. *Taylor* will not be required by any attentive reader of *Sydenham*, wherefore to have barely mentioned it, may be deemed ſufficient.

## XX. *A Defence of* Sydenham's *Hiſtory of the Meaſles, againſt* Morton, *by* Thomas Dickſon, *M. D. F. R. S.* &c.

THE celebrated *Morton*, in the Appendix to his *Pyretologia*, relates, that the *epidemical* meaſles of 1672, proved ſo fatal in the *autumnal months*, that about three hundred died of them *weekly*; whence his readers might infer, that about three thouſand ſix hundred perſons had fallen victims, in the ſhort ſpace of three months, to the peculiar malignancy of that ſpecies of the meaſles. As we have no authentic accounts of ſo many deaths in the ſame time from any other diſeaſe, (the plague excepted) my curioſity was excited to examine how far this extraordinary piece of medical hiſtory could be ſupported by other evidence. *Morton* himſelf firſt raiſed a ſuſpicion with regard to the truth of the fact; for, in the ſecond part of his *Pyretologia*, where he again relates the ſtory, he expreſſes himſelf in ſo looſe a manner, as only to ſay, that after the year 1670, he

remembered the number already mentioned to have died *weekly*, without ſpecifying, as before, the particular *year* or *ſeaſon* when they were ſo mortal. Upon inquiry, I am ſatisfied, that *Morton*'s account ought not to be credited; wherefore it behoves me to aſſign my reaſons for ſuch diſbelief, and to do this I think that I have no difficult taſk; for, by a late publication, intitled, *A collection of the yearly bills of mortality, from* 1657 *to* 1758, it appears, that the whole number of perſons who died of the meaſles in 1672, were 118, in the preceding year only ſeven, and in 1673, not more than fifteen *. If any degree of credit is to be given to the *collection* juſt quoted, (which we know to have been publiſhed by accurate and judicious men) *Morton*'s ſtory muſt be regarded as fabulous. Inſtead of 300 dying *weekly* for *three months together*, we find *at the moſt* only 118 for the *whole year*. And in this inſtance, can *Morton*'s account

* The numbers here mentioned are the more to be truſted, as during theſe, and ſeveral ſubſequent years, the meaſles made a diſtinct article, and were not mixed with the chicken-pox, &c. as has been often the caſe.

be put upon an equal footing of credit with the public bills of mortality?

If, upon this occaſion, the bills of mortality ſtood in need of authenticity, the great *Sydenham* might be brought to their aid. It is to me a moſt pleaſing circumſtance, to find ſuch an exact correſpondence between *them* and *his* hiſtory. They inform us, that in the year 1670, 295 people died of the meaſles, and no fewer in 1674 than 795. *Sydenham* ſays, that they were epidemic in both theſe years, and admirably deſcribes both ſorts, the laſt of which was accompanied with worſe ſymptoms. It ſeems remarkable too, that the number of thoſe who died of the anomalous ſpecies (as they are called by *Sydenham*) of 1674, is the greateſt to be met with in any year before or ſince in the bills which I have ſeen, except in 1742, when it amounted to 981 *, which is but little more than one-fourth of thoſe who (according to *Morton*'s account) died in the autumnal months of

* It would ſeem from the bills of mortality, that in this number of 981, are contained thoſe who died of the chicken-pox, raſh, &c.

1672.

1672. *Morton* appears to have been unfortunate likewiſe in fixing upon the autumnal months as the ſeaſon of ſuch great mortality; for *Sydenham* (*Syd. op. edit.* 1676, p. 272. and 273.) informs us, that both the epidemics which he deſcribed, began in January, and ended, or nearly ſo, with the ſummer ſolſtice. And can it be ſuppoſed, that the laſt mentioned Author, who profeſſedly writes the hiſtory of the epidemics of a great many years, including this, could have omitted ſuch a remarkable circumſtance as the variation of the ſeaſon in which the meaſles prevailed moſt? Surely not; and indeed, *Sydenham*'s total ſilence on ſuch a dreadful epidemic, had it ever exiſted, is to me inconceiveable. *Morton*, who did not publiſh the firſt part of his book till 1692, *viz.* twenty years after the date of the ſuppoſed fact, and when *Sydenham* was dead, might eaſily be impoſed on by the vague accounts which he had heard. He certainly had never conſulted the bills of mortality, otherwiſe he muſt have attempted to account for the amazing diſagreement between them and the account he

has given. A medical hiſtory, founded on dubious or falſe facts, is moſt likely to miſlead our judgment of diſeaſes; wherefore, the detection of even hiſtorical errors in phyſic is important: and eſpecially, as it checks our impetuoſity in forming haſty ſyſtems on the authority of others. Theſe remarks on *Morton*, however, are chiefly meant as a confirmation of the truth of *Sydenham*'s hiſtory of the meaſles, and ſeem a neceſſary ſupplement to my former paper in defence of his method of treating that diſeaſe.

XXI. *A Caſe of the* Cæſarean Section; *by* William Cooper, *M. D. communicated by Dr.* Hunter. *Read* 1769.

SIR,

IF you ſhould think the following caſe merits the attention of the Medical Society, I beg that you will do me the honour of laying it before them.

*Martha Rhodes*, aged 23 years, much deformed, being only about four feet four inches high, her back very hollow, her hips narrow, and lower extremities crooked, was married in October 1768, and miſcarried the Chriſtmas following. She became ſoon afterwards a ſecond time pregnant, and was attacked with labour pains on Friday morning the 20th of October 1769, about the time her reckoning expired. The pains were but trifling, until about one o'clock in the afternoon of the ſame day, when the membranes broke and the waters came away. Afterwards the pains increaſed conſiderably; and continuing ſtrong until midnight, without any indi-

cation of the labour being in the leaſt advanced, Mrs. *North*, the midwife who attended her, ſent for me.

I went immediately, found the patient's ſtrength not diminiſhed, her pulſe good, and the pains rather ſtrong. Upon introducing my finger into the *vagina*, the firſt thing which preſented itſelf to the touch, was an unuſual projection of the *os ſacrum* and inferior *vertebræ lumborum*, which being extremely prominent, had very much the feel of a child's head. This protuberancy approached ſo near to the ſymphyſis of the *oſſa pubis*, that I was only able to paſs one finger between them. By theſe means, however, I found the *os tincæ* to be high up, ſoft, and eaſily dilatable, although very little dilated. The parts were not particularly tender; and therefore, having preſſed the *perinæum* backwards, and introduced my finger during a pain, as far as I poſſibly could within the *os uteri*, I juſt perceived ſomething that felt like, and afterwards proved in reality to be the head of the child; which not advancing,

ſeemed

ſeemed to be the only cauſe of the *os uteri* remaining in the undilated ſtate.

The *pelvis* appeared to me to be ſo narrow, as to render it impracticable to bring the child away, even by *embryotomy*: I therefore apprehended that the *cæſarean ſection* was the only reſource, although a very doubtful one, for affording either mother or child a poſſibility of eſcaping with their lives. As the caſe was thus ſingular and important, I immediately called in Dr. *John Ford*, and Dr. *Cogan*. When theſe gentlemen had examined the ſtate of the parts, they were clearly convinced of its being exactly as I have above deſcribed. However, as the patient's ſtrength continued good, we thought it adviſable to appoint another meeting, and to invite ſome other eminent practitioners in midwifery to a conſultation about what was moſt adviſable in a caſe that happily ſo ſeldom occurs. In the mean time, we ordered her two grains of *opium* to be taken immediately, and repeated, if neceſſary, ſix hours afterwards, which had the deſired effects of greatly mitigating her pains, and

affording her at times ſome comfortable ſleep.

At the time appointed, beſides thoſe above named, the following gentlemen, amongſt others, attended, *viz.* Doctors *Heineken*, *Wathen*, *Mackenzie*, *Orme*, and alſo Meſſrs. *Thomſon*, *Hunter*, *Hewſon*, *Maclaurin*, *Lowder*, &c. ſurgeons. After a proper examination, they were unanimous in their opinion, that the caſe was as before deſcribed, and that the *cæſarean ſection* or *hyſterotomy*, although extremely dangerous and uncertain, was yet the only expedient for affording a poſſibility of preſerving either of the lives: *melius eſt enim anceps remedium experiri quam nullum* *. Their ſentiments were without delay related to the poor woman and her friends, who readily conſented to whatever might be approved of by us.

The operation was performed very ſkilfully by Mr. *Thomſon*, ſurgeon to the London Hoſpital, (with the aſſiſtance of Mr. *Hunter*, ſurgeon to St. *George*'s) the former of whom has given you an account

* Celſus.

of

of it. This being accompliſhed, the patient was carried in a very gentle manner to her bed, and directed to be kept as ſtill as poſſible.

To contribute to this deſirable end, and to allay the irritation of the wounded parts, we ordered her fifteen drops of the *tinctura thebaica* in a ſuitable vehicle, and a repetition of it at proper intervals. She behaved with ſurprizing fortitude during the whole proceſs, loſt very little blood *, and ſeemed to be moſt of all ſenſible of pain when the needles were paſſing through the *peritonæum*, eſpecially on the right ſide of the wound. It may perhaps be worth obſerving alſo, that the *uterus* itſelf ſeemed to be poſſeſſed of very little ſenſibility, even at the time of its being wounded. Afterwards, ſhe complained only of a ſoreneſs where the inciſions were made.

In this ſtate ſhe continued, being pretty compoſed and doſing at times, till about four hours after ſhe was laid in bed, when, finding the ſupine poſture uneaſy, ſhe,

* It is imagined, that the whole loſs of blood during the operation, did not exceed four ounces.

without

without the conſent of the nurſe, turned herſelf upon her right ſide. Very ſoon after this ſhe was attacked with dangerous ſymptoms, became ſickiſh, faint, unable to ſpeak, and died in about twenty minutes. On the firſt of theſe alarming appearances, Dr. *Ford* was immediately ſent for by the perſons who were left in charge of her, but ſhe expired before he got there.

The friends were prevailed upon to permit the body to be opened for examination. At the time fixed on for this purpoſe, moſt of the above-named gentlemen were preſent, and likewiſe Dr. *Hunter*, Dr. *James Ford*, Dr. *Dickſon*, &c. The following appearances were particularly remarked.

The *parietes* of the *abdomen* being laid open, the firſt thing that preſented itſelf was a large cake of coagulated blood, covering the whole anterior ſurface of the *omentum* and *inteſtines*, ſuppoſed to weigh about twenty ounces avoirdupoiſe weight. This *coagulum* increaſed in firmneſs the nearer it approached the edges of the wounded *uterus*, where a conſiderable part of it ſtrongly adhered; which is a preſumptive

ſumptive proof of its being ſupplied partly from the large ſinuſſes thereof, that were unavoidably cut through in the operation, and partly alſo from the veſſels that uſually furniſh the *lochia* after delivery, which are conſtantly torn aſunder by the ſeparation or exfoliation of the vaſcular membrane that lines the internal ſuperficies of the *uterus*, to which it properly belongs, the *decidua* of Dr. *Hunter*, or the *ſpongy chorion*. Additional evidences of this being the caſe might be adduced; from the lips of the wound through the ſubſtance of the *uterus* being found wide open, and alſo, becauſe the leaſt quantity of blood had not paſſed off in the ordinary way through the *vagina*; both of which circumſtances, I believe, were very obſervable to all the gentlemen preſent.

After removing the *uterus*, *rectum*, *veſica urinaria*, and other ſoft parts, the diſtance from the ſymphyſis of the *oſſa pubis*, to the projection of the ſuperior part of the *os ſacrum* and inferior *vertebra lumborum*, was found, upon meaſuring, to be an eighth part leſs than an inch. However, the exact dimenſions

dimenſions of this extraordinary *pelvis* will be beſt underſtood by the annexed figures, and their explanation.

As ſoon as the child was taken out of the *uterus*, the air having a free admiſſion into the lungs, it cried as heartily as children commonly do when they are born in the natural way. The uſual ligature was made, and the *funis umbilicalis* divided in the proper place by Dr. *John Ford.* Unhappily, however, upon examining the child, there was diſcovered an uncommon excreſcence, about the bigneſs of an egg, in the forehead, juſt above the noſe. It extended nearly over both the eyes, and underneath there was a deficiency of the ſkull, from whence it ſeemed to have an immediate communication at leaſt with the *meninges* of the brain, and perhaps alſo with the anterior part of the *cerebrum* itſelf. The *ſutura frontalis* was likewiſe very open.

The child took proper nouriſhment, had ſeveral ſtools, and in every reſpect appeared briſk, lively, and well, until the evening of the day after the operation, when it was taken

taken ſuddenly with convulſions, which ſoon went off. However, very early the next morning, it was attacked with two more fits, in the latter of which it died.

Soon after the birth of the child, an oozing took place round the edges of the excreſcence juſt above the root of its noſe, firſt of blood, and afterwards of a thin inodorous matter, reſembling *ſerum*; and for ſeveral hours before its death, the top of it waſted, became dry, and ſeemed inclined to ſlough away. As this ſingular tumor was ſituated ſo near the brain, and without the intervention of any bone between them, it is very natural to ſuppoſe that the child's death was occaſioned by it; eſpecially as no other viſible cauſe could be aſſigned.

Thus, Sir, I have minutely related ſuch particulars of this extraordinary caſe which fell under the obſervation of ſo many gentlemen eminent in their profeſſion, as I thought deſerving of notice. As far as I can learn, the *cæſarean ſection* has not been performed before, upon the living ſubject, in this great metropolis, for more than a

century paſt; and yet ſimilar emergencies muſt at leaſt have ſometimes occurred. Although, in the preſent inſtance, our earneſt endeavours were rendered abortive, yet there are undoubted examples upon record where the happieſt ſucceſs to both mother and child, has been repeatedly the conſequence of this operation *. And indeed I cannot but think, that in this inſtance alſo, there would have been a good foundation for the moſt flattering hopes with regard to the child, if it had been born without the defect taken notice of above. Whatever be the obſtacle, therefore, if, as in the preſent caſe, it leaves no poſſibility for the child's being delivered by the natural paſſages, I apprehend that ſuch extraordinary means as have, upon trial in ſimilar circumſtances, been found ſometimes to ſucceed, will not only become eligible, but

* Heiſteri chirurgicæ inſtitutiones, p. ii. ſect. 5. cap. cxiii.

Memoires de l'Academie Royale de Chirurgie, v. i. p. 623.

Ibid. v. ii. p. 308.

Deventer ſur accouchemens, p. 359.

Edinburgh Medical Eſſays, vol. v. art. 37. and 38.

that

that a ſupine omiſſion of them would be abſolutely incompatible with humanity; *quem enim non ſervaſti, dum potuiſti, illum occidiſti* *. And yet, as this poor woman ſunk, with every advantage for the operation, both with reſpect to herſelf and to the aſſiſtance given her, it clearly points out, that it ſhould never be undertaken, but with the utmoſt care and circumſpection.

Before I conclude, allow me to propoſe the following queſtion, *viz.* In ſuch caſes where it is certainly known that a mature child cannot poſſibly be delivered in the ordinary way alive, would it not be conſiſtent with reaſon and conſcience, for the preſervation of the mother, as ſoon as it conveniently can be done, by artificial means, to attempt to produce an abortion?

*Arundel Street,*
*Nov.* 24, 1769.

WILLIAM COOPER.

* Heiſteri inſtitutiones chirurgicæ, l. c.

XXII.

XXII. *An Account of the performing of the* Cæſarean Operation, *with Remarks, by Mr.* Henry Thomſon, *Surgeon to the* London *Hoſpital, communicated by Dr.* Hunter,

ON Saturday the 21ſt of October laſt, Dr. *John Ford* applied to me requeſting that I would perform the *cæſarean* operation upon a woman in Roſe and Crown Court Shoe-Lane, whom he aſſured me it was impracticable to deliver of her child any other way. Having never heard that the operation had been performed upon the living woman in England, I embraced the little opportunity I had before the appointed hour for performing it, of peruſing what had been written upon this ſubject; I conſulted the firſt and ſecond volumes of the Memoirs of the Academy of ſurgery at Paris, and *Heiſter's* ſurgery. I gained very little ſatisfaction in regard to the manner of performing the operation, but thought myſelf fully juſtified in the intention,

tion, from the number of caſes which have been related, and ſaid to have been attended with ſucceſs.

Having before me ſuch authorities, and being convinced there was no alternative in this unhappy woman's caſe, I agreed to perform the operation; eſpecially as ſhe declared, that on the preceding night and on that morning, ſhe had frequently felt the child move; a circumſtance fully juſtifying an attempt to its relief and preſervation *.

The poor woman, convinced of the only chance left for her ſafety, and willing to preſerve her child, cheerfully conſented to undergo the requiſite operation, which was performed in the preſence of Drs. *Henneken*, *Wathen*, *Orme*, *Mackenzie*, *Ford*, *Cooper*, Meſſrs. *Hunter*, *Maclaurin*, in the following manner:

A table being prepared, ſhe was placed upon it lying on her back, her head being ſupported by pillows, and her legs hanging

* Heiſter, page 28. part 2. mentions the impropriety of the operation's taking place, without a certainty of the *fœtus* being alive.

down. The belly appeared prominent chiefly on the right ſide, the protuberance of the *uterus* extending but about two or three fingers breadth on the left of the *linea alba*.

There was no difficulty therefore to determine where the inciſion was to take place.

Accordingly, about a hand's breadth from the navel on the right ſide, I began the inciſion in a longitudinal direction, and continued it about ſix inches in length, the middle of which was nearly oppoſite to the navel; the ſkin and adipoſe membrane being cut through on the outer edge of the *rectus* muſcle. I carefully made an inciſion through the tendinous expanſion of the abdominal muſcles and *peritonæum*, ſufficient to introduce the forefinger of my left hand, when, with a curved knife conducted with my finger, an opening was made, and the *uterus* expoſed.

The *uterus* appearing very ſolid to the touch, it was apprehended by ſome gentlemen, that the *placenta* might perhaps adhere to that part of it which lay bare, and which

which might conſiderably obſtruct the removal of the child, or endanger an *hæmorrhage:* With precaution, therefore, an aperture was made in the center ſufficient to admit my finger, with which conducting the curved knife, I dilated the *uterus* upwards and downwards to the full extent of the outward wound.

The *placenta*, which actually adhered to this part of the *uterus*, eaſily gave way, and receded as my finger advanced in making the opening.

The *placenta* and membranes immediately began to protrude, Dr. *Ford* at this juncture ſlipping his hand in whilſt the ſides of the *uterus* were kept aſunder, brought forth the child by its feet, and immediately afterwards the *placenta* and membranes were extracted with the greateſt eaſe. Dr. *Ford* took upon himſelf the management of the child and ſeparation of the *umbilical* chord, and in a few minutes the child cried ſtrongly.

The *uterus* being diſburthened of its contents, and contracting amazingly faſt, the *omentum* and bowels began to protrude, Mr.

*John Hunter* was ſo obliging as to aſſiſt me in retaining them within the belly, whilſt I cleanſed away the grumous blood (which was ſmall in quantity) and made the *gaſtroraphy* or ſuture of the belly.

I made four ſutures nearly equal to each other, and about an inch and a half from the edge of the lips of the wound.

The ligatures being double, pieces of linen ſpread with common plaiſter, and rolled up in the form of bolſters or compreſſes, were applied between them, after the manner of the quilled ſuture, and the wound was thereby brought into and retained in cloſe contact; and lint and a common pledgit being applied, finiſhed the operation.

The courage of the woman previous to the operation appeared great; but her patience and fortitude under it excited admiration; and the only times ſhe was heard to expreſs anguiſh were during the puncture of the needle in making the ſutures of the belly.

From the operation being performed to her deceaſe, which happened about five

hours after, I did not ſee her; but upon inquiry found, ſhe had only complained of a little ſmarting at the wound, had ſlept very quietly for two hours, and afterwards her ſtrength gradually failing, ſhe died ſeemingly in great compoſure.

As it was natural to wiſh for an opportunity of inſpecting the body, to ſee whether any thing extraordinary had occaſioned her death ſo ſoon after the operation; her huſband and friends were ſolicited for this purpoſe, and gave their conſent.

Accordingly, on the following evening the body was opened in the preſence of Dr. *Hunter*, Dr. *James Ford*, and Dr. *Dickſon*, beſides the phyſicians and ſurgeons who were preſent at the operation.

The contents of the *abdomen* were expoſed by a longitudinal inciſion in the courſe of the *linea alba*, interſected by another acroſs the upper part of the belly. A quantity of grumous blood appeared lying on the ſurface of the *uterus* and *omentum*, which being removed, was computed to be about twenty ounces. The *uterus* was contracted to the ſize of a common melon, and laid

in a natural poſition. In this contracted ſtate of the *uterus*, the wound which had been made into it appeared to be nearly the whole length of its body, and within its cavity was contained a ſmall quantity of grumous blood.

There ſeemed to be no livid appearance or alteration of other parts to enable us to form any judgment what might have been the immediate cauſe of her death. The quantity of extravaſated blood (allowing for *ſerum* and *coagulum*) did not exceed thirty ounces; and this being gradually poured out, either from the veſſels of the internal ſurface of the *uterus*, or from the inflicted wound, might with ſome propriety be alleged as an aſſiſtant cauſe; yet it is very well known, that in natural labours the diſcharges will exceed this quantity by much.

The *lumbar vertebræ*, together with the firſt bone of the *ſacrum*, projected conſiderably inwards: the *lumbar vertebræ* making a curve to the left, cauſed the *uterus* in the pregnant ſtate to lie almoſt wholly on the right ſide: and after removing the *uterus*, it

it was remarkable to find only the ſpace of ſeven eighths of an inch between the ſymphyſis of the *oſſa pubis* and projection of the *ſacrum**.

## REMARKS.

The public is much indebted to Monſieur *Simon*, for his inquiries relative to this operation. In the firſt volume of the Memoirs of the Academy of Surgery at Paris, it appears, that he has been at the pains of collecting from every author, hiſtories of caſes to prove the poſſibility and ſucceſs of the *cæſarean* operation.

If we ſhould conſider all theſe caſes in the light of facts, it muſt excite wonder that the moderns have ſo little availed themſelves or profited by the labours of the ancients. Succeſs ſeems to have attended almoſt every operation of this kind, that has been recorded; but if we are to believe what *Scipio Mercurius* ſays, that in his time the practice of this operation was as common

* In order to convey a proper idea of the ſtate of theſe parts, reference muſt be had to the annexed plates.

in France as blood-letting for head-achs was in Italy; a doubt may ariſe whether the account has been fairly ſtated *. It is ſcarcely poſſible that ſucceſs could have attended all. A variation in conſtitution, tedious and lingering labour pains, irregularities, perhaps, after the operation, exceſſive *hæmorrhages*, catching cold, bad nurſing, *&c.* would (I ſhould imagine) render a *common* operation liable to many failures; and an author would be much more eſteemed and relied upon, if, with candour and diſintereſtedneſs, he would relate the inſtances wherein he has failed, that the world might judge how far the chance or hazard of the operation rendered it adviſable or not.

* Heiſter, p. 35. ſect. v. endeavours to account for this extraordinary expreſſion of Mercurius, by alleging, that there was a difference between *hyſterotomy* and *embryulcia*; that *embryulcia* ſignified the extraction of the *fœtus* by the natural paſſages, without any inciſion either in the *uterus* or *abdomen*, though it has been called *hyſterotomy* or extraction of the *fœtus* by the *cæſarean* ſection; that by an abuſe of the terms, Mercurius might in ſome meaſure have ſaid true, that the extraction of the *fœtus* was, in his time, as common in France as bleeding for the head-ach was in Italy: alluding to the practice of extracting the *fœtus* by inſtruments in all difficult labours.

The

The accounts given of the performance of this operation are vague and indefinite. Sometimes it was performed on the right, at others on the left ſide of the belly; but I can find no reaſon for the preference that was given, except in two inſtances, in one where the left ſide was choſen to avoid wounding the liver, and in the other, the right on account of a ſcirrhous tumor on the left.

Here I cannot help wondering, notwithſtanding the generality of the caſes appear to have been ſuch, as to indicate no material neceſſity for performing the operation on the right or left ſide, why ſuch preference ſhould have been given.

There is no intimation of diſtortion of ſpine, and very few caſes ſeemed to be difficult from the deformity of the *pelvis*; therefore, it is to be conjectured, that they had recourſe to the operation chiefly in caſes where the labour was tedious or preternatural.

Taking it therefore in this ſenſe, one would wonder why ſuch a preference of

inciſion

inciſion ſhould take place, when the greateſt protuberance of the belly would be in the middle, or in the courſe of the *linea alba.*

The frequency of protruſion of the bowels immediately upon opening the *peritonæum,* is a poſſible criterion of their error in performing the operation, and in ſome meaſure ſhews, that either they muſt have made the inciſion higher than neceſſary, or too much laterally.

It is a great happineſs, that in theſe times there ſhould be ſo little neceſſity for this operation; but ſurely the only means to have obviated this difficulty, (the protruſion of *inteſtines)* would have been by performing the operation in the courſe of the *linea alba*; eſpecially as in moſt of the caſes it does not appear they were reſtricted in the choice of place where to perform the operation.

The protruſion of *omentum* and bowels, however, I imagine, will be likely to happen in the operation, even when performed in the moſt eligible place; for if the operation ſhould be protracted after the delivery

very of the *fœtus*, by the extraction of the *placenta* and membranes, the contraction of the *uterus*, and uavoidable efforts of the woman will allow the bowels to protrude, or force them outwards.

The *hæmorrhage* ſo frequently ſpoken of by *Heiſter*, is a circumſtance not to be ſo much dreaded as he intimates; and indeed we cannot allow him to be a competent judge of this matter, ſince he confeſſes that he never performed the operation upon a living woman. The wound inflicted upon the *uterus* will be attended nearly with the ſame *hæmorrhage*, let the place of inciſion be where it will; but the inciſion of the *abdomen* will vary in this reſpect; for if the *rectus* muſcle ſhould be cut through, a conſiderable effuſion of blood may enſue from wounding the epigaſtric artery. The courſe of the *linea alba*, or of the *linea ſemilunaris*, as nigh to the outer edge of the *rectus* muſcle as poſſible, appears to me to be the moſt eligible places for performing the operation, as well to avoid an *hæmorrhage* as the protruſion of *inteſtine*.

It

It has been adviſed, in performing the gaſtroraphy, or ſuture of the belly, in theſe caſes, to leave a ſpace at the lower part of the wound, as a depending orifice for the diſcharge of blood or matter. I had this intention in view previous to the performing of the operation; but was ſufficiently appriſed of its inutility during the performance of it.

The greateſt part of the *uterus* lying on the right ſide of the *abdomen*, the operation was obliged to be performed on the outſide of the *rectus* muſcle; and the inciſion of the *uterus* during the operation, correſponded exactly with the external wound. Obſerving the amazing contraction of the *uterus* upon the removal of the child and *ſecundines*, it ſtruck my imagination that the two wounds could not long remain oppoſite to each other; and therefore, that a depending orifice in the external wound could be but of little avail. I was not deceived in my ſuggeſtion; for, upon opening the dead body, I found the wound of the *uterus* lying nearly in the direction of the *linea alba*, and of courſe conſider-

conſiderably removed from any connection with the external wound; nor indeed could a depending orifice be of any kind of ſervice whilſt the patient reſted on her back, as the blood or matter could not be evacuated in ſuch a poſture; and obliging her to lie on her face or belly, would perhaps have been attended with the greateſt inconveniencies.

We cannot believe, at leaſt I acknowledge myſelf to be one of the number who muſt doubt the authenticity of hiſtories recording the ſucceſs of this operation, when it is conſidered that no caſe appears to have been accompanied with ſuppuration of the wounded *uterus*—Surely, among ſuch a multiplicity, this circumſtance might have been expected, as it is very little probable that every wound inflicted upon ſo ſpongy and vaſcular a ſubſtance, ſhould have united by what ſurgeons call the *firſt intention.* Yet we are aſſured by Monſ. *De la Peyronie* that Monſ. *L'Amiral* a ſurgeon at *Marigny* performed this operation, and that the woman was cured by the moſt ſimple dreſſings in fifteen days*.

* *Memoires de Chirurgerie,* tom. i. p. 641.

A pre-

A preſumptive proof of its healing by the Firſt Intention.

*Rouſſet* appears to have been a very great advocate for the *cæſarean* operation, and relates a number of inſtances of its ſucceſs; while *Marchant* on the other hand ſeems to diſpute the authenticity of many of them, condemns the operation, and adds, that *Guillemeau*, *Paré*, *Carbonet*, *Brunet*, and *Viard*, very eminent practitioners, had found the operation very unſucceſsful.

From this diſpute between *Rouſſet* and *Marchant* it may reaſonably be inferred, that had a fair account been handed down to poſterity of the failures and ſucceſs of this operation, there might have been no difficulty in determining, whether it was eligible or not.

The caſe related by *Rouſſet* of the impracticability of delivering a fœtus which had been a long time dead in the *uterus*, notwithſtanding the attempts that were made to extract it by the crotchet and other inſtruments, proves the utility however of the operation in ſuch inſtances, as well as where the deformity of pelvis (mentioned by

by Monſ. *Ruleau*) renders the delivery impoſſible by the natural paſſages.

The moſt authenticated accounts of this operation are thoſe which are related in the latter part of Monſieur *Simon*'s memoir, and which the academy of ſurgery at Paris took no little pains to aſſure themſelves of being facts: And the teſtimonies of Monſieurs *De la Peyronie* and *La Faye*, add weight in confirmation of ſome of them.

The caſe by Monſieur *Soumain* at the concluſion of this memoir, is ſo circumſtantially related both in regard to the neceſſity of the operation, and the manner of performing it, that no doubt can be left of the authenticity of the fact.

Much, therefore, having been ſaid for and againſt the *cæſarean* operation, I am of opinion, that the reſult of time and experience muſt determine whether it be eligible or not.

That in caſes ſimilar to this of *Mary Rhodes*, or where from any preternatural diſeaſe of *vagina*, &c. *embryulcia* is rendered impracticable, there ſeems to be no alternative

alternative for the preſervation of the child, or chance of ſafety for the unhappy mother, but in having recourſe to this operation.

## XXIII. *Remarks on the Cure of Conſumptions, by* J. Fothergill, *M. D. F. R. S. Read* June 11, 1770.

*To the* MEDICAL SOCIETY *in London.*

GENTLEMEN,

IN a former paper, I ſuggeſted ſome doubts I had entertained reſpecting the uſe of balſamic medicines, ſtrictly ſo called, in the cure of conſumptions, and offered ſome conjectures in regard to their firſt introduction into internal uſe, and their application to pulmonary diſeaſes in particular. Upon the whole, I am ſtill of opinion, that their uſeful efficacy in theſe diſorders is much to be ſuſpected, and that an indiſcriminate uſe of medicaments of this claſs, has rather a tendency to increaſe than mitigate the ſymptoms attending a genuine *phthiſis pulmonalis*.

Whilſt I am endeavouring to excite ſuſpicions againſt what appear to me the *lædentia* in this diſtemper, I ſhould think myſelf

fortunate, could the review of ſeveral years experience afford any uſeful hints to thoſe whom I wiſh to aid, and to whom theſe remarks are particularly addreſſed, the young practitioners.

When we conſider the ſtructure of the lungs, the tenderneſs of their fabric, the multitude of veſſels of which they conſiſt, the importance of their uſe, the many accidents they are unavoidably expoſed to, and, in compariſon of many other parts, their inſenſibility to immediate leſion, we ſhall be much more ſurpriſed there are ſo few perſons die of conſumptions, great as the number may ſeemingly appear *, than that ſo many periſh by this diſtemper.

To enumerate all the cauſes that are capable of producing a *phthiſis pulmonalis*, is not my intention; but to point out the

* In this city the weekly bills are ſuppoſed to exhibit a tolerably exact account of thoſe who die of the reſpective diſeaſes mentioned in that liſt. But I am informed, that the article of conſumptions includes generally all thoſe who die of any lingering diſeaſe, and are much emaciated; by which the liſt is vaſtly enlarged beyond what it ought to be, to the reproach of our country; foreigners imagining that this diſeaſe is much more frequent amongſt us, than it is in reality.

neceſſity of attending to its commencement, in order to prevent its progreſs. The meaſles, and other inflammatory diſeaſes of the breaſt, to which children, as well as others, are expoſed, often lay the foundation of conſumptions: ſo likewiſe will colds, the ſuppreſſion of ſome ſalutary diſcharge, ſcrophulous and venereal affections, and many other cauſes, all which will operate more certainly and ſpeedily in bringing the diſtemper to a fatal concluſion, in proportion as a certain tenderneſs in the fabric of the lungs, an hereditary *labes*, and other circumſtances, concur: for, to thoſe who are acquainted with the animal œconomy, it is rather a matter of wonder how the ſtrong and robuſt eſcape affections of the lungs, ſurrounded as we are with ſo many cauſes capable of producing theſe affections, than that perſons of a certain make and particular delicacy of conſtitution, are ſo ſubject to pulmonary diſeaſes.

We cannot, I think, be too induſtrious in propagating the following doctrine: That the time at which a phyſician can be of moſt uſe in the cure of conſumptions, is at their firſt beginning. The ſlighteſt ca-

tarrhal defluction ought not to be neglected, if it does not go off in a few days.

The beginning of moſt conſumptions is a cough, more or leſs violent. This cough is produced either by a thin ſaltiſh defluction, irritating the membrane that lines the *trachea*, ſo as to bring on a general ſpaſm of all the parts, in order to diſlodge and diſcharge the irritating matter; or elſe, by an inflammation of ſome part of the lungs or *bronchiæ*, produced by one or other of the general cauſes of inflammation.

If the catarrhal cough is neglected, or is repeatedly increaſed by the cauſes that firſt produced it, this will be ſufficient to bring on an inflammation, which, if not removed, terminates in the uſual manner of inflammations; either by reſolution, in which caſe the lungs receive but little harm; or by ſuppuration, in which the miſchief, however ſmall at preſent, does not fail to be productive of laſting and injurious conſequences; proportioned to the extent of the injury, and the condition of the ſufferer, in reſpect to prediſponent cauſes.

If the inflammation terminates neither by reſolution nor ſuppuration, it often leaves a ſchirrous hardneſs, whereby this particular part of the lungs, however ſmall and confined, becomes of little or no uſe in the œconomy of this organ; but by occaſioning an obſtruction of circulation and reſpiration in one ſingle point, ſubjects the ſound parts of the lungs to greater labour, as was before obſerved *.

From hence it is at leaſt evident, that the utmoſt care ſhould be taken at the commencement of this diſeaſe. The moſt trifling cough, if it continues, may either advance gradually till it ends in immediate miſchief, or may leave ſuch impreſſions as may ſubject the patient to perpetual returns: A cough therefore in children, or young perſons, or in perſons of a certain make at any time of life, ought ſpeedily to be cured.

Perhaps it will be needleſs to ſuggeſt the means of doing this moſt ſafely: But there is one part of management neceſſary

* See a former paper on this ſubject.

to be obſerved by thoſe who are about children thus affected, that cannot be too ſtrongly inſiſted on by the phyſician, and that is, the neceſſity of proper diet, proper likewiſe in reſpect to quantity. If ever an extreme attention to regimen is neceſſary, it moſt certainly is ſo to perſons affected with coughs, as will perhaps be more fully mentioned; but to children it is ſtill more ſo, both as they are greater ſufferers by improper diet, and have leſs command over their own appetite and inclinations.

For if a large quantity of the beſt chyle adds ſpeedily to the preſent ſtock of blood, as all muſt paſs through the lungs, this temporary increaſe of quantity will add to their irritation, the quantity itſelf being a *ſtimulus*. But if the chyle thus increaſed has not been properly digeſted, either on account of the quantity or kind of food, the miſchief will be the greater. And this poſition will, I believe, be found uniformly true through every ſtage of pulmonary diſeaſes, and will evince the neceſſity of giving very explicit and peremptory orders in relation

relation to diet, and the duty of thoſe who attend the ſick in this diſtemper.

I know, gentlemen, that you, as well as myſelf, often have occaſion to look back at the fatal neglect, committed both by the ſick themſelves, as well as thoſe who ought to have had their future health more at heart. With what eaſe would many of the moſt incurable conſumptive caſes have been prevented, or cured, at their firſt commencement? A perſon whoſe emaciated figure ſtrikes one with horror, his forehead covered with drops of ſweat, his cheeks painted with a livid crimſon, his eyes ſunk, all the little fat that raiſed them in their orbits, and every where elſe, being waſted; his pulſe quick and tremulous, his nails bending over the ends of his fingers, and the palms of his hands as dry as they are painfully hot to the touch, his breath offenſive, quick, and laborious, his cough inceſſant, ſcarce allowing him time to tell us, that ſome months ago he got a cold, but he knew, perhaps, how he got it; he neglected it for this very reaſon, and neglected every means of aſſiſtance, till the

miſchief was become incurable, and ſcarcely a hope left of palliation. You ſee multitudes of ſuch objects daily, and ſee them with a mixture of anger and compaſſion for their neglect and their ſufferings. Excuſe me for treſpaſſing in this manner on your time and your humanity. Though it is not in your power to prevent all theſe ſacrifices to ignorance and inattention; yet, if the faculty combine in prompting their fellow-citizens to neceſſary care, and prompt them to ſuffer no ſlight beginnings to paſs unregarded, however they may be acting againſt their own intereſt, they will have the ſatisfaction of contributing to the preſervation of many a uſeful life; for, perhaps, among thoſe who periſh by conſumptions, there are many who, in reſpect to the excellencies both of body and mind, have given indications of becoming conſpicuous ornaments of humanity.

When a cough begins, if the patient is very young, let the quantity of diet, eſpecially ſolids, be leſſened; let the deficiency be made up with warm thin ſuppings. Barley-water,

ley-water, milk and water, thin gruel, the lighteſt broths, ſuch things of this kind as the age and condition of the patient admit.

If there be much heat, or any pain in the breaſt, bleeding will be indiſpenſably neceſſary. The quantity to be taken away, and how often repeated, muſt be determined by the ſymptoms, the patient's age, habit, pulſe, and other circumſtances.

In reſpect to medicines, the moſt demulcent and cooling are indicated; and when the ſymptoms of inflammation are abated, gentle anodynes will be uſeful. Every thing of a heating irritating nature, ſuch as the balſams, ſhould be avoided, and even the expreſſed oils of almonds and olives are often to be ſuſpected, and uſed with caution, as they are ſeldom totally free from ſome degree of rancidity, than which ſcarcely any thing is more irritating and diſguſtful. I have known the common doſes of *nitre*, the ſaline mixture, and other cooling ſalts, increaſe a cough by irritation; ſo that even theſe ſhould be adminiſtered, when neceſſary, rather in ſmall doſes, and frequently.

frequently. The common emulſion made with good freſh ſweet almonds, is a very proper vehicle for the ſeveral remedies indicated in this complaint; but if the almonds are not freſh, or are intermixed with the bitter, as is too frequently the caſe, they are injurious.

Freſh white poppy ſeeds, in the proportion of half an ounce to a pint of Briſtol or pure water, make an excellent emulſion and unexceptionable; and theſe may be raiſed in any quantity both at home and in our own colonies.

If the thin copious defluction leſſens, and the liquid grows thicker, and yet comes up without difficulty, the cough will abate and gradually ceaſe entirely: It muſt depend upon the judgment of the preſcriber to know when and to what extent anodynes are to be uſed. I believe they are never ſafe at the beginning of a cough, till by proper methods the tendency to inflammation is firſt abated, except where the cough is altogether of the ſpaſmodic kind, as in ſome hyſteric caſes, or when it proceeds from acrimony heretofore diſcharged by an iſſue,

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an ulcer, or eroſions on the ſkin, and imprudently ſuppreſſed; or from gouty affections; in which caſes anodynes are undoubtedly of uſe: But in coughs ariſing from ſuppreſſed perſpiration, or an inflammatory diatheſis, as in the meaſles and epidemic conſtitutions, in ſuch caſes, anodynes are ſeldom to be allowed, unleſs it be to obtain a truce from temporary violence.

The miſchiefs that have proceeded from *Godfrey*'s cordial, *Bateman*'s drops, *Squire*'s elixir, and other heating anodynes in the hands of ignorance, are ſcarcely to be enumerated.

When by a proper cooling regimen, and evacuations, the inflammation accompanying the cough is abated, then ſmall doſes of anodynes joined with the medicines above mentioned, to ſuch a quantity as to mitigate a fruitleſs, inceſſant cough, are very beneficial. If this firſt period has paſſed over without any attention paid to the diſorder, the cough becomes more harſh and dry; ſlight lancinating pains are now and then felt, darting, as it were, through the ſubſtance of the lungs, from

ſome

ſome central point in the cavity of the *thorax*; commonly from under one of the breaſts, ſometimes exactly in the middle. A ſoreneſs is complained of that is almoſt continually felt: this is augmented much by the cough, but not to ſuch a degree as the pleuretic ſtitches. It is not unuſual under theſe circumſtances to ſee the thin frothy phlegm which is diſcharged by coughing, ſtreaked with blood; ſometimes a ſmall ſpoonful, or two or more, are coughed up at ſome certain time of the day. It is not often that much larger quantities are thrown up in this ſtate of the diſeaſe, unleſs the patient is very plethorick, or the fabric of the lungs extremely tender, or the cough is inceſſant.

The ſame indications point out a ſimilar proceſs, in reſpect to cure. To withdraw as much nouriſhment as can be done without the riſk of ſuffering from inanition; to ſupply the moſt cooling nouriſhment, and the moſt eaſily digeſted, in moderate quantities, and the more frequently; to bleed in ſmall quantities repeatedly; judging of this neceſſity not from the appear-

ance

ance of the blood alone, for this will often continue ſizy, till more is taken away than is compatible with the patient's ſituation in other reſpects. For if we leſſen the *vires vitæ* by inanition too much, a diſeaſe then takes place, which probably will increaſe our difficulty, that is debility of the ſolids, and the conſequent vitiation of the fluids. The pulſe, the heat, the pain, cough, reſpiration, ſtrength and age of the patient ſhould all be taken into conſideration. Many perſons live free from complaints with ſizy blood. The condition therefore of the blood ſingly ought not to determine us; we ſhould examine all the evidence.

It ſeems unneceſſary to ſpecify what I mean by light cooling nouriſhment: It may not however be improper to obſerve that wine, or any other fermented ſpirituous liquors, are improper alone, and malt liquor, however weak, ſeems very generally injurious; fleſh-meat, or indeed animal food of any kind, ſeems under theſe circumſtances improper. Spices of all kinds in

any quantity, and indeed every thing poſſeſſed of much piquancy. Whey, either from goats or cows, milk, butter-milk, milk and water, light broths, and all the farinaceous preparations are to be recommended, but ſtill remembering to adviſe caution in reſpect to quantity. For if a larger quantity of the beſt adapted nutriment is taken in at once than can be well digeſted, the chyle, ſo far from affording that bland and balmy fluid to the blood, that muſt qualify it for the offices of nutrition, communicates a ſharpneſs that defeats our expectations. It matters very little both in this and many other diſeaſes, what quality the food is of, if the quantity likewiſe does not correſpond to the powers of digeſtion. I have not the leaſt doubt but this is likewiſe your opinion; and that you inforce it in your directions: But that this is the caſe with practitioners in general, may perhaps not be ſo certain.

Under ſuch a ſituation as is above deſcribed, the methods pointed out ſeldom fail to abate the fever and pain, lower the pulſe,

pulſe, and eaſe reſpiration; the diſcharge then becomes thicker, and the cough, inſtead of being violent and continual, juſt comes on when a quantity of well digeſted phlegm ſolicits its diſcharge, and ſtep by ſtep uſual health returns.

To ſuch convaleſcents, one cannot but recommend the utmoſt diſcretion in reſpect to their conduct. A violent cold, a debauch, long confinement in populous cities, and other ſimilar cauſes, will ſoon bring back the ſame ſymptoms, which, if frequently repeated or neglected, bring on a more formidable diſtemper, from which, if the patient recovers, he will have much to attribute to the ability of his phyſician.

In the farther progreſs of this diſtemper medicines of a different claſs are found of advantage, the bark, elixir of vitriol, *Briſtol* and other waters, a total abſtinence from animal food, and other methods of treating conſumptive diſeaſes, have their uſes. Should you think theſe remarks not unworthy of your notice, I ſhall endeavour

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to collect ſuch farther remarks as have occurred to me on this ſubject, and ſubmit them to your conſideration.

I am, &c.

XXIV.

XXIV. *An Account of a late epidemical Diſtemper, extracted from a Letter addreſſed to* Gedney Clarke, *Eſq; by* William Sandiford, *M. D. of* Barbadoes. *Communicated by Dr.* Fothergill. *Read* April 16, 1770.

IN the months of *May*, *June*, and *July* laſt, I was called to many patients, white as well as black, young as well as old, and of both ſexes, all of whom laboured under a diſeaſe, which, from the nature of the complaints, as well as the method of cure, may be denominated a putrid remitting fever. The ſymptoms were various in various patients: in ſome caſes, they were ſo mild, that for the firſt two or three days, the patients complained of little more than alternate heats and chills, together with a general laſſitude of the whole body; in others, and more generally, the patient was attacked all at once in a moſt violent manner, the head, and of that principally the fore-part, being greatly affected. One ſo ſeized, ran about

like a perſon diſtracted; another fell down ſuddenly like one ſtruck dead; and even in thoſe, in whom the ſymptoms did not run high enough to produce this effect, ſo liable was the head to become affected, that I ſcarcely remember one patient in whom this was not a principal, as well as a never failing complaint; ſo that this, with the ſtupor and delirium, that generally attended it, and which were always worſt at night, I looked upon to be the chief diagnoſtics of the diſeaſe. To which I may add a certain diſagreeable noiſe in the head and ears, often ending in deafneſs, great giddineſs, and imperfection of ſight, ſo as to incapacitate the patient from ſtanding or walking without danger of falling, or even ſeeing the light without offence; great pain in the back, an uneaſy ſenſation about the pit of the ſtomach, with reachings, and a diſpoſition to vomit; great load and oppreſſion about the *præcordia*, together with a difficult, laborious reſpiration; uncertain fluſhings in the cheeks and forehead, whilſt the tip of the noſe has been often felt as cold as ice; and all this attended with intenſe thirſt and a parching

parching heat all over the body: after theſe a profuſe ſweat generally broke out, which brought on a remiſſion of all the ſymptoms; but left the patient ſo cold, weak, and diſpirited, as to make the ſtrongeſt cordials neceſſary to ſupport and keep him up; the feet to the knees, and the hands to the elbows, being often as cold as marble; nay, ſo weakening and exhauſting were theſe ſweats, that I remember ſome perſons of the ſtrongeſt and moſt robuſt conſtitutions, who were reduced, in a ſmall ſpace of time, to the ſtate of children, being unable to ſtand or walk, or even to ſit, without ſupport. The eyes had generally a fiery red appearance, ſomewhat mixed with yellow, which colour became more diſcernible as the diſeaſe advanced, till at length it diffuſed itſelf over the whole face and ſurface of the ſkin: at other times, chiefly about the approach of the fit, which, by their appearance, I could often forebode, they looked dull, wateriſh, and heavy, and exhibited that appearance which is peculiar to perſons

under intoxication, or whoſe brain is greatly affected.

The pulſe, in the ſtate of remiſſion, was generally ſmall, weak, and quick; as the time of attack approached, it grew fuller, ſtronger, and quicker, till at the acceſs of the fever itſelf, it was as ſtrong, full, and quick, as in the higher inflammatory fever; which induced ſome who ſaw the diſeaſe in this ſtage, and were unacquainted with its nature, to order bleeding: but though there were the ſtrongeſt reaſons imaginable, from all appearance of ſymptoms, to authoriſe this procedure; yet ſuch was the peculiar nature of this diſeaſe, that neither bleeding, purging, nor indeed any other evacuation, *as ſuch*, was of uſe, unleſs under the circumſtances and reſtrictions hereafter to be mentioned: nay, I have ſeen a ſecond bleeding ſo ſink a ſtrong robuſt man, that he was obliged to drink ſeveral pints of old Madeira wine, before he could be reſtored to any degree of ſtrength and ſpirits; and this too under circumſtances of high delirium, and where any perſon unac-

quainted with the nature of the diſeaſe, would have thought it unpardonable to have omitted bleeding. The like alſo has been obſerved of purging; and accordingly, though blood drawn has often exhibited ſigns of the higheſt inflammation, and therefore would appear to warrant both evacuation and attenuation; yet ſo injurious were ſuch meaſures found in this diſeaſe, that even one or two doſes of nitre have been known to produce a purging, and a ſmall doſe of rhubarb has brought about ſuch a diarrhœa, as could afterwards ſcarcely be reſtrained, weakening and reducing the patient to a ſurpriſing degree; a circumſtance, I found by experience, ever to be avoided, the diſeaſe generally doing this ſufficiently of itſelf; ſo that, however neceſſary, or even to be admitted once, bleeding was to relieve any preſſing ſymptom, or avert any future ill conſequence that might be apprehended from its omiſſion, yet it was ſcarce ever to be repeated; and though purging might be neceſſary to keep the bowels duly ſoluble, in order to carry off any offending matter, yet

it was as cautiouſly to be purſued as bleeding, both manifeſtly conſpiring againſt one of the principal indications of cure, the ſupport of the *vis vitæ*.

The tongue, in the beginning of the diſeaſe, was of a crimſon hue, which, as the diſeaſe advanced, inclined to a duſky yellow; ſometimes it had on its ſurface a thin, white, ſoft fur, and was moiſt, often trembling, as the patient endeavoured to put it out; at other times, chiefly in the ſtate of remiſſion, it was rough and dry, the patient complaining of the like diſagreeable ſenſation in his mouth: but the appearance which moſt characteriſed this diſeaſe, and which indeed was chiefly diagnoſtic of it, was a ſmooth, dry, gloſſy appearance along its whole middle, whilſt the ſides reſembled thoſe of perſons ſubject to the ſore mouth.

The urine at firſt was crude, pale, and thin; as the diſeaſe advanced it became thicker and more ſaturated, reſembling whey, which at length turned to a flame colour, obſervable in the urine of ſuch as have uſed much exerciſe, and taken long journies,

journies, and let drop a thick, whitiſh brown ſediment; at other times, chiefly when the diſeaſe has been of ſome ſtanding, and the patient apparently much reduced, the urine has put on quite a bilious colour, tinging white linen or paper dipped into it with a bilious yellow hue.

With reſpect to the matter thrown up by vomiting, it was for the moſt part green and porraceous: in fact, I have ſeen it ſo green as to communicate the like colour to water when mixed with it, and kept for inſpection. This, however, of all evacuations, ought not to be diſpenſed with; the patient being generally relieved of the load and oppreſſion about the *præcordia* in proportion to this evacuation; and where it has been omitted, Nature has ſhewn its expediency by continually ſoliciting the ſtomach, until a cholera ſupervening, has taught the phyſician, by its happy effects, what ought to have been his conduct.

I muſt not omit to mention the ſtools of perſons affected with this diſeaſe: in ſome they exactly reſembled the fat of crabs; in

others they were briny and ſharp, and in others they were like dirty water; but though they varied thus in different patients, yet in all they were very fœtid and offenſive, and the patients ſeldom or never failed to complain of a hard tenſe belly.

As to the blood, though it was often ſizy, yet it was eaſy, even under that circumſtance, to diſcover its tendency to putreſcence: for the part beneath the ſizy ſurface readily yielded to the ſlighteſt attempt to divide it, and appeared interſperſed with livid ſpots, ſeparating at the ſame time a bilious yellow ſerum.

I have now, Sir, given you a pretty full deſcription of the diſeaſe, upon which you may depend; if, however, different circumſtances of climate and ſituation ſhould produce any variety in it, not here taken notice of, you will pleaſe to remember, that my plan was, only to relate what I had ſeen and experienced myſelf, without entering any further into the ſubject. It remains only therefore, to acquaint you with the method of cure I found the moſt ſucceſsful, obſerving evacuations in general, eſpecially

eſpecially thoſe by bleeding, not ſucceſsful; on the contrary, that, by weakening and reducing the patient, they ſeemed rather to conſpire with the diſeaſe. You may be certain I was as ſparing as poſſible in drawing this vital fluid: ſome portion, however, it was ſometimes neceſſary to draw; but then it was when the diſeaſe was recent, the patient young, ſtrong, and plethoric, the inflammation high, and where the omiſſion of this evacuation might have been attended with ſome immediate bad conſequence. Under ſuch circumſtances, bleeding, in a proportion ſuitable to the nature of the diſeaſe, tended to mitigate the ſucceeding fit, and in all probability, to bring the diſeaſe ſooner to a plain remiſſion: with the ſame view a very gentle purge, as before deſcribed, was of uſe; beſides, when theſe means had been uſed, the phyſician could, with greater propriety, adminiſter the warm, cordial, alexipharmac and antiſeptic medicines, which now became highly neceſſary to check the growing putreſcent ſtate of the juices.

But

But though blood might and ought to be drawn under the circumſtances juſt mentioned; yet, when the contrary was the caſe, or the operation had been once performed, the uſe of the lancet was to be withheld, even though the blood ſhould appear highly ſizy; for it was found by experience, that the ſeptic diſpoſition of the humours, was but too apt to produce attenuation, and even diſſolution.

This done, an emetic was always found of uſe, the patient generally throwing up great quantities of a thick, bilious, jelly-like ſubſtance, to the great relief of the load and oppreſſion about the *præcordia*, at the ſame time, that it had the further good effect of producing a ſtool or two; and indeed Nature ſeemed, in a particular manner, to point out this evacuation, as the patient, for the moſt part, complained of a bitteriſh taſte, with a ſenſe of ſomething copperiſh and diſagreeable in his mouth, of which he was generally relieved by this evacuation; ſo that I found it neceſſary, in the courſe of the diſeaſe, to repeat it as often as ſuch ſymptoms appeared.

Having

Having now cleanſed the firſt paſſages, the next indication to be fulfilled, appeared to be that of checking and correcting the putreſcent ſtate of the juices, and of co-operating with Nature in eliminating the morbid matter through the proper excretories; for which purpoſe, the warm, cordial, alexipharmac and antiſeptic medicines ſeemed principally neceſſary; but though theſe had all the good effects that could be expected from them, in keeping up the *vis vitæ*, correcting the humours, and aſſiſting Nature in the expulſion of the morbific matter; yet all theſe proved inſufficient of themſelves to effect a cure, until the uſe of the bark was introduced, the patient often diſſolving away under the violent, profuſe, cold ſweats, until this medicine put an effectual check to them; nay, ſo ſingular was the efficacy of this medicine in this diſeaſe, that I can truly ſay, I know of none that were cured without it, and all thoſe who neglected to take it, however conformable they might have been in other reſpects, were nevertheleſs often precipitated

tated into the danger of a dropſy or conſumption: of ſuch indiſpenſable uſe was the bark in this diſeaſe!

In my firſt uſe of this medicine, I blended it with the alexipharmacs in the form of a decoction; but as all the good effects reſulting from the mixture, ſeemed principally owing to the bark contained in it, I thought it was but juſt to give it its due preference; and accordingly afterwards adminiſtered it alone, either in decoction or ſubſtance, as it ſeemed neceſſary.

It is proper to remark particularly, that whereas moſt writers forbid the uſe of the bark abſolutely, unleſs in the ſtate of remiſſion and intermiſſion, I found it neceſſary to give it at any time of the diſeaſe indiſcriminately, and ſucceſs juſtified the practice, the patient otherwiſe diſſolving away irretrievably under the cold, colliquative ſweats, he had perpetually upon him.

With reſpect to bliſters, though I found them neceſſary to rouſe, and give a ſpring to Nature, as well as to relieve any topical pain; yet the diſcharge they made was ſo

great

great and weakening, that I often wiſhed to be able to effect the purpoſes intended by them, without putting Nature to ſo great an expence; beſides, from the ſharpneſs of the humours, the bliſtered parts often ulcerated ſo ſeverely, that it was difficult to heal them up even after the patient was apparently well; ſo that I was at times indiſpenſably obliged to uſe them, yet it was always with reluctance.

I cannot diſmiſs the ſubject without inforcing the uſe of old Madeira wine in this diſeaſe; a medicine of ſo ſingular efficacy, whether conſidered as a cordial or an alexipharmac, as to be ſcarcely inferior to any the ſhop affords. I had one patient who took no other medicine throughout the whole courſe of the diſtemper, until the remiſſion made it neceſſary to adminiſter the bark, to put off the periodic returns of the fever; of this, therefore, the patient may, and ought to drink freely throughout this diſeaſe, in the form of ſangree, acidulated with elixir of vitriol.

This liquor, with panada, hartſhorn and calves feet jellies, ſago, rich broths with aromatic

aromatic herbs, and things of the like ſoft and nouriſhing qualities, are the moſt proper diet in this diſeaſe. But, however, the method of treatment may conquer the diſeaſe, a change of air, and a courſe of exerciſe ſuited to the ſtrength of the patient, are eſſentially neceſſary towards the perfect re-eſtabliſhment of his health.

I have now, Sir, performed the taſk you were pleaſed to aſſign me. If ſome things ſhould be too lightly touched, or others too minutely dwelt upon, however I may have failed in the execution, you will be aſſured, my intention was, to manifeſt my readineſs to oblige you, and to anſwer, as far as in my power, the benevolent purpoſes of your requeſt. I ſhall fully ſupply any of my own deficiencies by referring you to the judicious Sir *John Pringle*, who has treated the ſubject fully and accurately, and enter'd pretty minutely into its ætiology; in all which there is a perfect agreement with what has obtained here.

It may, however, not be unworthy notice, that for theſe two years laſt paſt,

it has been remarkably warm and moiſt in this iſland: that great quantities of rain have fallen: that the days have been very hot and ſultry, whilſt the nights have been ſo damp and chill, as to ſtrike perſons with great coldneſſes and ſhiverings who have been expoſed to them: that moſt of thoſe who have been attacked with this fever, were ſuch as lived in the loweſt and moiſt ſituations; in places thick beſet with trees, and ſurrounded with water, and where the ſprings lay neareſt to the ſurface: that fiſhermen, and ſuch as were moſt expoſed to the cold and moiſtneſs; as alſo, thoſe of the weakeſt and moſt lax conſtitutions, were particularly objects of it. In all the epidemics, as they have of late ſeverally obtained here, there was ever to be obſerved ſomething of a putrefactive tendency.

I have only to add my wiſhes, that thoſe who ſhall peruſe the method here recommended, for the cure of this diſeaſe, may find it as ſucceſsful as I have: a ſucceſs which I muſt, in a great meaſure, attribute

attribute to the aſſiſtance I received from reading Sir *John Pringle*, and ſome hints I was favoured with by my friend Dr. *Kyd*.

I am, *&c.*

WILLIAM SANDIFORD.

XXV. *Ap-*

## XXV. *Appendix to a Paper on the* Hydrocephalus Internus, *by* William Watſon, *M. D. F. R. S. Read* 30 April, 1770.

### *To the* MEDICAL SOCIETY.

GENTLEMEN,

AS an Appendix to my former * communication on the *hydrocephalus internus*, I take the liberty of ſubjoining the following:

An healthy boy, aged ſix years, received, in *November* laſt, on the top of his head, a ſmart blow from a ſtone thrown at him by one of his companions: of this he complained a good deal at the time; but as the wound was but ſlight, it was almoſt forgotten. In about a fortnight from this accident, he made frequent complaints of a pain in his head. As his breath was at this time unuſually offenſive, and his belly ſomewhat enlarged, this diſorder was ſup-

* Page 78, *et ſeq.*

poſed to be owing to worms. In a few days the pain of the head increaſed; he had a conſiderable degree of fever, was exceedingly reſtleſs, and loſt his ſpeech.

The ſecond day from the loſs of his ſpeech I firſt ſaw him: the byſtanders informed me, that the fever, within theſe few days, was much increaſed: his pulſe was quick, and his fleſh hot: his cheeks fluſhed conſiderably, and he ſweated much about the head, face, and neck: he was in a lethargic ſtupor, ſcarce ſenſible of any thing that was ſaid to him, and parted with his urine and ſtools involuntarily: the pupils of both eyes were in the greateſt degree of dilatation, and they did not contract, when a lighted candle, or any other object was brought haſtily near them; an indication of the loſs of ſight: the right arm was, in a conſiderable degree, enfeebled; but with the left arm and hand he was, when rouſed, conſtantly rubbing his forehead, as he rolled his head on the pillow from ſide to ſide. Though his ſleeps were ſhort, whenever he awoke, he ſhrieked for a conſiderable time. Beſides

frequent

frequent returns of general convulſions, the muſcles of his face, eyes, and eye-lids were particularly convulſed; and ſo at times was his right enfeebled arm.

From conſidering the hiſtory of this diſeaſe, and comparing it with ſeveral others I had heretofore ſeen, I had little doubt of its having its ſource from water in the cavities of the brain, and judged that there were but ſmall hopes of relief: I, however, ordered a bliſter to his head, ſome medicines to abate the fever, and to keep his bowels gently ſoluble, with proper liquids and nouriſhment.

For four or five days from this time, every ſymptom increaſed to ſuch a degree, that death was hourly expected. The patient was indeed reduced to the greateſt degree of debility: in the courſe of a few days more, however, the ſymptoms were milder; he every ſecond day took an opening medicine; and as his feveriſh heat abated, he was allowed weak broth, and aliment more nutritious than that before directed, with a ſmall proportion of wine.

In about a fortnight from my firſt ſeeing him, his pupils contracted at times, and he gave indications of his being able at ſuch times to diſtinguiſh objects. The convulſions, fluſhings, great reſtleſſneſs, cryings out upon waking, and other ſymptoms, continued, though in a leſs degree, for near a month longer; by which time his ſight was quite reſtored, and his right arm had recovered its ſtrength: in about a fortnight more his ſpeech returned, after having loſt it two months; by ſlow degrees he recovered his ſtrength, and he is now perfectly well.

The above recited is the only inſtance, which has occurred to my obſervation, of a recovery from a dropſy of the brain, when, from its attendant ſymptoms, little doubt remained of the diſeaſe being completely formed; which, that it was ſo in the preſent caſe, the hiſtory before mentioned ſtrongly indicates. The abſolute exiſtence indeed of fluid, preternatural in its quantity, being contained in the cavities of the brain, can only be aſcertained by an examination after death: but as the ſymptoms of the patient, now under conſidera-

tion,

tion, were exactly ſimilar to thoſe in others whoſe heads having been opened, water in an enlarged quantity has been found in the brain, I am induced to conſider them as ariſing from the ſame cauſe.

The late Dr. *Whytt*, as I mentioned in my former communication, out of more than twenty labouring under this diſeaſe, ſaw none recover; and the ſame misfortune has attended me with more than half that number. The recovery, therefore, of the patient above-mentioned, under ſuch dreadful circumſtances, having exceeded my expectation, I thought proper to acquaint you therewith: it may tend to encourage us not too haſtily to deſert our patients, even in this diſeaſe. It may ſometimes happen, as in the preſent inſtance, that Nature, though but moderately aſſiſted, will enable the ſick to ſtruggle through diſeaſes beyond our moſt ſanguine expectation.

Previous to his illneſs, this boy, as I before mentioned, had received a blow from a ſtone on his head. He had likewiſe had a fall down ſtairs about the ſame time, and

had ſmartly ſtruck his head againſt the ſtairs. One of the girls, who I formerly mentioned to have died of a dropſy in the brain, had likewiſe fallen with her head againſt the floor, previous to her being taken ill. How far theſe injuries might have contributed to the production of this diſeaſe, I do not take upon me to determine: they are only taken notice of here, as matters of fact, from which, without the confirmation of a great number of ſimilar inſtances, no inference can or ought to be deduced. That the brain does ſuffer from violent concuſſions, is not to be doubted.

In our diſcuſſions in relation to obſcure diſeaſes, the nearer we approach to preciſion, the more uſeful are our obſervations: as a further confirmation, therefore, that the ſymptoms mentioned in the courſe of theſe papers, very ſtrongly indicate the dropſy of the brain, permit me to add the following:

I was very lately deſired to conſult with another phyſician in relation to a boy about four years old, whoſe diſeaſe was exactly ſimilar to that juſt now recited. Without any

any apparent cauſe he loſt his uſual ſpirits and temper, and was affected, at times, in his ſtomach and head. In about a fortnight he became feveriſh, complained much of a pain in the head, was exceedingly reſtleſs, impatient of light, and vomited, whenever either medicines or nouriſhment were given him; he was coſtive, and had no ſtools without aſſiſtance.

I firſt viſited him on the eighth day after the fever began: he had had general convulſions the day before I ſaw him: his pulſe was quick, his fleſh hot, his pupils conſiderably dilated, and both eyes, at times, affected with the ſtrabiſmus: he was comatoſe, and when rouſed, though he called for nothing, took now, and retained whatever was given him. On the ſucceeding days, though the heat ſubſided, his pulſe continued equally quick, his cheeks fluſhed at times, his lethargic ſtupor increaſed, he parted with his urine and ſtools involuntarily, he loſt his ſpeech, and became quite blind: the convulſions increaſed in their frequency and violence; his pulſe roſe to a quickneſs ſcarce to be counted;

and, all medical endeavours proving fruitleſs, he died on the fifth day after my firſt ſeeing him, being the thirteenth day after the fever began. Two days before his death, the *tunica conjunctiva* of the left eye became inflamed; a circumſtance obſerved in others by Dr. *Whytt*.

At my deſire the head was examined; neither the brain nor its membranes had the leaſt inflammatory appearance; but near four ounces of fluid were found in the cavities, which had neither colour nor ſmell; and a quantity of it being expoſed to the flame of a candle in a ſpoon, did not coagulate, but went off in vapour, without leaving any *reſiduum*: the bones of the head were perfectly cloſed.

In every inſtance that has occurred to my obſervation, the fluid in the brain of thoſe who have died of this diſeaſe, has been found, like that juſt now mentioned, without colour or ſmell; and indeed indicated no morbid appearance. This has induced me to be of opinion, that whenever this fluid is productive of diſeaſe and death, its effects ariſe not

from

from any preternatural acrimony it is endued with, but the miſchiefs are produced ſimply by the ventricles being overloaded with it; and this fluid being incompreſſible itſelf, forces the brain againſt the ſkull, and thereby impedes the free paſſage of the blood through the veſſels of the brain and its meninges: beſides, by its preſſure, it diſturbs the functions of the brain itſelf, and its effects on the optic nerve are early ſeen; firſt, by the ſenſibility of the *retina*, which renders the ſick, in the firſt ſtage of this illneſs, extremely impatient of light; and afterwards, as the diſeaſe increaſes, occaſions a loſs of ſight, and conſequently a dilatation of the pupil to its greateſt extent. The ſame cauſe affecting the third pair of nerves, which are ſubſervient to the motions of the eye, occaſions the irregular convulſive motions and diſtentions, which are uſually obſerved in that organ in the courſe of this diſeaſe. A greater degree of diſtention of the brain, and its compreſſion from this fluid, brings on general convulſions, and is moſt uſually fatal.

XXVI. *An*

XXVI. *An Extract of a Letter from Dr.* William Thomſon, *Phyſician at* Worceſter, *to* William Hunter, *M. D. giving an Account of a fatal Effuſion of Blood into the Cavity of the* Pericardium. *Communicated by Dr.* Hunter. *Read* June 25, 1770.

*Worceſter, March* 3, 1769.

A Gentleman of this place, about forty-two years of age, of middle ſize, and moderately robuſt, had been liable to frequent returns of a violent inflammatory rheumatiſm, which generally laſted ſeven or eight weeks. About the end of laſt *January* he was attacked with that diſorder accompanied with fever, and with great pain, which at firſt affected his limbs; but after ſome days laid hold of his cheſt, and was particularly violent in his left ſide, from which it could not be removed by repeated bleeding, nor even relieved but by the application of a bliſter to the part: this procured conſiderable eaſe, while its ſtimu-

lus

lus and diſcharge laſted; but when theſe were gone off, the pain returned, though not with its former violence; and ſometimes it ſhifted to the breaſt, clavicles, and left ſhoulder.

He alſo laboured under a conſtant tickling cough, which, though not violent, created him much uneaſineſs, by aggravating the pains in his ſide, and other parts of his cheſt.

He had all his life been liable to occaſional palpitations of the heart, and conſequent fluttering, unevenneſs, and intermiſſion of the pulſe. Theſe returned ſeveral times during the continuance of his rheumatiſm, and ſometimes laſted for a day together, or even longer; but they were readily and certainly relieved by bleeding, and ſometimes by a gentle evacuation by ſtool.

I ought alſo to mention, that he had, for many years, been ſubject to frequent returns of a profuſe *hæmorrhage* from the noſe. This barely made its appearance once or twice in the courſe of his rheumatic diſorder; but after a diſcharge of a few drops

of

of blood, it ceaſed ſpontaneouſly, without the leaſt effort made to ſtop it. The ſame thing had happened to him, and in the ſame manner, in a former fit, when I attended him about four years ago.

In the ſpace of three weeks he was bled ſix times, on account of the pains in the ſide and breaſt, difficulty of breathing, *&c.* and in all he loſt about fifty ounces of blood.

In other reſpects he was treated as the fever and other ſymptoms ſeemed to require; and about the end of three weeks his fever was much abated, his pains were relieved, and I had reaſon to hope for the ſame favourable termination of his complaints that I had experienced in the former fit, juſt mentioned.

In this ſtate of his diſorder, on the eighteenth of *February*, in the forenoon, he was ſuddenly ſeized with an uncommon faintneſs, difficulty of breathing, great anxiety and oppreſſion; and in place of his former acute pain, he complained of a pain which was more dull, but at the ſame time much more diſtreſſing, and attended with a great

a great degree of weight, behind the breaſt-bone, a little towards the left ſide, and extending through to his back; a cold clammy ſweat immediately ſpread all over his body; his arms, legs, and thighs became pale, or rather livid, and perfectly cold; the ſtrokes of his pulſe were not very quick nor irregular, but they became extremely low and feeble, and he had, in almoſt every reſpect, the appearance of a dying man.

In this ſtate he remained twelve or fourteen hours, after which his ſymptoms were conſiderably alleviated; he ſlept a little at times, but always awoke in great agony, and with a ſenſe of ſuffocation; his limbs became warm, and the clammy ſweats went off.

But this relief was not of long duration; for on the ſucceeding day about noon, all his complaints returned with great violence: his reſtleſſneſs was increaſed, and yet he was afraid of having his body moved; for, upon the leaſt motion of it, his faintneſs and agony were greatly aggravated; and, upon ſuch occaſions, he conſtantly cried out to be left quiet, or he ſhould inſtantly expire.

expire. His extremities were again cold, has nails livid, *&c.* and thus he continued till towards the morning of the next day, the twentieth, when his ſymptoms remitted once more.

This interval was not of longer continuance than the laſt; for, in about ten or twelve hours, all the horrid train of ſymptoms returned, and continued with little or no remiſſion, till the morning of the twenty-ſecond when he died.

It was with ſome difficulty that leave was obtained to open the body. Mr. *Ruſſell* did that office: I attended, and gave him what aſſiſtance I could. We were hurried in point of time, and wanted ſeveral conveniencies we wiſhed for, otherwiſe I ſhould have been able to give you a more ſatisfactory account,—ſuch as you would have expected from the opinion, which I know you have of Mr. *Ruſſell*'s abilities and accuracy in matters of that kind. Such obſervations, however, as we were able to make, I will faithfully relate to you.

We firſt of all examined the body externally, to ſee whether the left was larger than the right ſide, or had the appearance of being

being diſtended with any fluid. This had been done ſeveral times while our patient was alive, upon a ſuſpicion of a ruptured *empyema*, or the effuſion of ſome fluid into the cavity of the *thorax*, which ſeemed to be indicated by the ſymptoms; but neither while he was alive, nor on this occaſion, could we obſerve any fulneſs on that ſide, nor any apparent difference between it and the other.

When the cheſt was laid open, the firſt thing that drew our attention was a large ſubſtance, ſituated juſt behind the *ſternum*, extending from the *diaphragm* quite to the clavicles, and compreſſing the lungs, on each ſide, into a narrow compaſs. This proved to be the *pericardium* diſtended with blood, of which it contained almoſt three pints in a fluid ſtate, beſides ſeveral large and firmly coagulated clots. The heart was cruſted all over with coagulated blood, which adhered cloſely to it, and gave it the appearance of a dark coloured lump of fleſh; but when cleared from the blood, its ſubſtance was remarkably pale, and ſo flaccid, that you might have wrapped it

round your finger like a bladder. All its cavities were entirely without either fluid or coagulated blood, and nothing like a polypous concretion could be diſcovered in any of the large adjacent veſſels.

We looked for the rupture or ſource from which the extravaſated blood had been derived; but to our great mortification, we could not diſcover it, though the heart, and all the great veſſels, were attentively examined, both in the body and out of it. We were not provided with the proper inſtruments for making out this diſcovery by injection or inflation; nor would the ſhortneſs of the time which was allowed, and other unfavourable circumſtances, permit us to procure them.

The other parts in the *thorax* were apparently ſound; and we had no reaſon to ſuppoſe the abdominal *viſcera* diſeaſed; but we had not time to examine them.

It will readily occur to you, that the more remarkable circumſtances attending this caſe, and in which it differs from many of the ſame ſort that have been recorded, are the ſlow and gradual extravaſation

ſation of the blood into the *pericardium*; the extraordinary diſtenſion of that bag by ſo large a quantity of the fluid; and the length of time which the patient lived after the oppreſſive ſymptoms came on, when we may preſume the fatal miſchief was begun.

The cauſe of ſuch a complaint appears the more myſterious to me when I conſider, that the force of the blood muſt have been much moderated by the quantity which was taken from the patient in the courſe of his rheumatic complaint; that, on the morning of the eighteenth, his pulſe was remarkably calm; his cough, which had been ſometimes troubleſome, was conſiderably abated, and he was at that time perfectly free from the palpitation of the heart; of which laſt ſymptom he never complained, from the time the uncommon ſymptoms above-mentioned came on, till the time of his death.

I am, *&c.*

## XXVII. *An Account of the good Effects of dividing the* Aponeuroſis *of the* Biceps Muſcle, *in a painful lacerated Wound, by Mr.* B. Wilmer, *Surgeon at* Stony Stratford, *in a Letter to Dr.* Hunter. *Read* October 1, 1770.

*Stony Stratford, July* 10, 1769.

SIR,

AS I have ſome reaſon to think the perſon, who is the ſubject of the following caſe, owes her life to the doctrine you inculcate with regard to the cauſe of thoſe ſymptoms which ariſe from wounded tendons, I imagine it will not be unacceptable to you; and if you think it of conſequence enough, ſhall be glad if you preſent it to the Medical Society.

I am, *&c.*

B. WILMER.

A plethoric young woman, ſervant to a gentleman near this place, on the eleventh of

of June laſt, was thrown from a cart, and in the fall received a wound by a flint in the flexure of the arm. I ſaw her ſoon after the accident; ſhe was then in great pain: there had been a pretty conſiderable hæmorrhage, and her arm was much ſwelled.

The wound was tranſverſe, near an inch in length, its lower extremity terminating at a little diſtance from the inner condyle of the *humerus*. The *faſcia* of the biceps muſcle was torn, and part of it appeared ragged between the lips of the wound.

An emollient cataplaſm was applied to her arm, ſixteen ounces of blood were taken away; the fore-arm was kept in a bent poſition, to relax the biceps, and ſhe was put to bed. A laxative medicine was alſo directed, to keep the body open.

She paſt the night very ill; her arm being exceſſively painful, and ſhe was very feveriſh. She could neither move her arm herſelf, nor would ſhe ſuffer it to be moved by any one elſe.

To avoid being tedious, I ſhall only obſerve, that a fortnight had elapſed, during which time the bad ſymptoms I have deſcribed continued, notwithſtanding a ſtrict antiphlogiſtic plan was purſued. The pain was ſo acute that ſhe could get no ſleep even with opiates, and the great irritation kept up a conſtant fever, accompanied alternately with ſhiverings, and weakening ſweats. The wound diſcharged a thin gleet of a greeniſh colour, and the parts round it were much indurated: and as ſhe expreſſed it, her arm felt as if it had been bound tight by a cord. In theſe diſtreſſing circumſtances, when her life was apparently in the greateſt danger, I determined to divide the *faſcia*, thinking, by taking off the ſtricture, we ſhould probably have an alteration in our favour. On the twenty-fifth of *June*, I made an inciſion two inches long, through the integuments and aponeuroſis of the muſcles. As ſoon as this was done, the divided parts of the *faſcia* flew open, and the ſucceſs was equal to our expectation.

She

She was relieved immediately; the pain, tumor, inflammation, and fever left her; and the firſt time the dreſſings were removed after the operation, there was laudable pus, inſtead of the thin gleet which had been before conſtantly diſcharged. The wound granulated and healed as ſoon, and with as little trouble, as if it had been in any other part of the body, a weakneſs only remaining, which, in a little time, I hope, ſhe will get the better of. It may be neceſſary to take notice, that there was no matter under the *faſcia*, nor was the diviſion of it attended with much pain.

Whoever conſiders the great irritability of parts in a ſtate of inflammation, and how much the pain is increaſed by any preſſure of bandage, will eaſily account for the ſudden relief which this perſon had from a diviſion of the *faſcia*, the inelaſticity of which prevented it from giving way to the ſwelling of the parts beneath it: and this caſe ſeems to make it extremely probable, that the bad ſymptoms following wounds of the tendons and their

aponeuroſes, reſult more from mechanical preſſure, than from any peculiarity in the ſtructure of theſe parts, which were, till of late, thought ſo exquiſitely nervous and ſenſible,

XXVIII.

XXVIII. *An Obſervation on the Inſenſibility of Tendons, by Mr.* John Teckel, *Surgeon; with an Introduction by Dr.* Hunter, *and by him communicated to the Society. Read* October 1, 1770.

*To the* MEDICAL SOCIETY.

GENTLEMEN,

YOU thought Mr. *Wilmer*'s obſervation might be uſeful: the practice was ſucceſsful in that one inſtance, and the theory is applicable to a great variety of pains about the joints, and ſuch parts as are confined by bones, ligaments, tendons, aponeuroſes, *&c.* and which, therefore, in an inflamed ſtate, become compreſſed in proportion as they ſwell. This circumſtance, no doubt, may have conſpired with others, to raiſe and ſupport an opinion through many ages, that tendons are endued with exquiſite ſenſibility. My own obſervations firſt raiſed doubts, and then furniſhed me with what I thought irre-

fragable arguments againſt the popular opinion. Since that time, it has been oppoſed by one of the greateſt men in the age: the attention of the public has been very generally attracted to the diſpute; experiments have been made without end and without mercy; and yet obſervation has ſo often contradicted obſervation, that there are ſtill doubts ſubſiſting. In this controverſy, experiments on brutes are always exceptionable. When they are made even upon the human body without great circumſpection, they may deceive; but under favourable circumſtances, and when conducted with dexterity and caution, they become deciſive. With this view of the ſubject, you may imagine, that the following letter gave me much ſatisfaction; eſpecially as I could depend upon the accuracy and integrity of the author: and though it may not come ſo properly into your plan, as into a phyſiological work, yet it may be acceptable to the Public, and might be introduced as a ſupplement to Mr. Wilmer's caſe. Mr. Teckel's account is as follows:

A la-

A labouring man, ſervant to *Henry Bates* near *Bovintong*, in *Buckinghamſhire*, by ſome accident in loading a cart, cut off the ends of the middle and ring fingers; the latter in ſuch a manner, that about half an inch of the tendon of the *perforans* projected. In this condition I ſaw him, about ten minutes after the accident.

It immediately occurred to me, that I now had a fine opportunity to convince myſelf of the truth or fallacy of your opinion concerning the inſenſibility of tendons, *&c.* I therefore paſſed a piece of ſtring, about the ſize of the tendon, round his wriſt, from thence brought it about the injured finger, and placed it in ſuch a manner, as to make it project parallel to, and beyond the ſtump, of equal length with the expoſed tendon. I then told my patient, that I intended to cut the one or the other of theſe projecting parts, with my ſciſſars, while he ſhould turn his head away; but he was to tell me which I cut, without ſeeing what was done. He laughed, and aſked me whether I thought he had no feeling; however, he complied. I

then

then divided the tendon with my ſciſſars; he was aſked which I had cut; he anſwered, "the ſtring;" but when he turned his head round, and found it was actually the tendon, he was much ſurpriſed that he had felt no pain: and when I talked to him afterwards, he declared he felt not the leaſt pain, and abſolutely thought I had cut the ſtring only.

XXIX.

## XXIX. *An Account of a ſucceſsful Method of treating ſore Legs, by Mr.* Joſeph Elſe, *Surgeon to* St. Thomas's *Hoſpital, communicated by* John Fothergill, *M. D. F. R. S. Read* October 15, 1770.

NO diſeaſe occurs more frequently in a large hoſpital than old ulcers on the legs: their cure is generally tedious and troubleſome, often uncertain, and ſometimes dangerous. It is a diſeaſe to which the poor are more liable than the rich, and for this obvious reaſon; they are more expoſed to accidents, and when they meet with a wound or contuſion in the leg, not being in circumſtances to lie by, if they can poſſibly move about, the injured part inflames and becomes an ulcer, which, for want of proper care, may continue many years. Women with obſtructed menſes, and ſuch as have ſharp juices and a cachectic habit of body, are very ſubject to this diſorder. When people in eaſy circumſtances meet with ſuch accidents, having the means of reſt and proper care, they generally

ſoon

ſoon get well; or when afflicted with ſuch a diſeaſe as may diſpoſe the body to this complaint, having recourſe to proper medical aſſiſtance, they often either prevent the diſorder, or obtain a cure by removing the prediſpoſing cauſe. It is a grievous complaint in all ſituations of life, but is doubly ſo to the poor, frequently depriving them of the means of earning their bread. Every ſurgeon, who has frequented large hoſpitals, knows and laments the difficulty of cure; for though reſt and a horizontal poſture, with any ſimple application, may effect it in recent ſores, and in good conſtitutions; yet, where the ulcers are of long ſtanding, or have hard callous edges, or happen to ſuch as are in a bad habit of body, we daily ſee them reſiſt every uſual method. Sometimes preparations of mercury, ſuch as calomel, or *Van Swieten*'s ſolution of ſublimate, have ſeemingly produced a good effect: at other times, I have thought ſea-water of uſe, and have often ſeen the bark preſcribed with advantage. But I have frequently known all theſe fail. It is no uncommon thing, after bringing an ulcer into ſuch a

ſeeming diſpoſition to heal, as to flatter us with the hopes of a complete cicatrix in a few days, to ſee it become painful, inflame, look foul, ſpread, and even gangrene; and when, by the uſe of antiſeptic fomentations and poultices, the bark and opium, the ſpreading of the ſore is ſtopped, and the ſloughs caſt off, the ulcer is probably larger than it was when we firſt began to treat it. By a continuance of theſe means, we may bring it again into a diſpoſition to heal, and probably ſee the ſame ſcene acted over again.

About two years and an half ago, in a converſation with Dr. *Huck* upon this ſubject, he told me, that Mr. *Battiſcomb*, apothecary in *Half-moon Street Piccadilly*, had a very ſpeedy method of curing ſore legs; one remarkable inſtance of which he had lately ſeen, and had heard of others. The caſe which had fallen within his knowlege was that of a ſervant maid, who had laboured under a very bad painful ulcer of the leg for twelve or fourteen years, and had come out of two hoſpitals without her cure. Dr. *Huck* ſaid, that he did not know the whole

whole of Mr. *Battiſcomb*'s method, but that he believed the principal part of it conſiſted in the application of a tight bandage. He ſaid, that Mr. *Battiſcomb* firſt applied a linen rag moiſtened with a liquor which was probably tincture of myrrh: that over this he applied a thin plate of lead, and then a roller very tight from the toes to above the knee. If the bandage grew looſe in the courſe of the day, (for ſhe went conſtantly about her work) ſhe was to return to him to have it reapplied. She took five drops of a medicine twice a day, which Dr. *Huck* ſuppoſed was a ſolution of *mercurius corroſivus ſublimatus* in *alcohol*. She got well in about two months, and has continued to enjoy good health ever ſince *. She ſtill wears a very tight roller in the day, taking it off on going to bed, and applying it again in the morning.

I immediately recollected, that Mr. *Battiſcomb* had cured a grenadier and an officer's ſervant, of ulcers in the legs,

* It is now four or five years ſince ſhe was cured.

which I thought would be difficult to heal without reſt, and therefore adviſed them to go into an hoſpital. Some time afterwards, meeting with Mr. *Battiſcomb*, I told him, that I had heard of his ſucceſs in curing a diſeaſe which foiled us very much in the hoſpital, and that if he would ſell us the application, we would purchaſe it of him. He ſaid nobody could uſe the application but himſelf.

Mr. *Martin*, my colleague in St. *Thomas*'s hoſpital and I, determined to try what bandage would do in old ulcers of the legs, without adminiſtering any internal medicine; and find it ſo exceedingly efficacious, that I believe it will ſeldom fail where there is no carious bone. The firſt thing we do, if the ulcer be foul, is, to endeavour to make it clean, by the application of a bread and milk, or ſome other emollient poultice. When we have obtained this end, we apply a linen cloth moiſtened with tincture of myrrh or *Goulard*'s *eau vegetau-minerale*, as from experiment we may find beſt to agree. If theſe ſhould give pain, we then firſt apply dry lint,

the legs, recommends a laced ſtocking, not only to promote the cure of this diſeaſe, but alſo to prevent a relapſe; and gives ſome caſes of his ſucceſs: however, I think the roller greatly preferable to the laced ſtocking, becauſe it can be applied more evenly, and conſequently fits eaſier.

XXX. *An uncommon Caſe of a fatal* Hernia, *by Mr.* Joſeph Elſe, *Surgeon to St.* Thomas's *Hoſpital, communicated by* John Fothergill, *M. D. F. R. S. Read* October 15, 1770.

ON a *Wedneſday* in *April* 1767, before I was elected ſurgeon to St. *Thomas*'s hoſpital, in returning from giving a lecture, after all the ſurgeons had left the houſe, I was deſired to ſee a patient, who, I was told, had been out in a coach upon buſineſs, and from a jolt had a ſwelling come ſuddenly in his groin. It was about the ſize of a cheſnut, ſeated below the edge, and about the middle of *Poupart*'s ligament. It had both to the eye and touch, ſo much the appearance of a lymphatic gland, that I could ſcarcely credit the man's account of it; eſpecially as I was informed that he was in the hoſpital for pains in his limbs, which he ſaid were rheumatic, but which, by the phyſician whoſe patient he was, were deemed to be venereal. I deſired that the ſwelling might be poulticed; that he

might be carefully watched to ſee if any ſymptoms of ſtrangulation came on; and that he might be ſhewn to the ſurgeon to whom he belonged. On the Saturday following, I was told that he was dead with ſymptoms of ſtrangulation, having paſſed no ſtool, though ſeveral clyſters had been adminiſtered. I procured leave to open the body; and raiſing the integuments, laid bare the lymphatic gland which I had felt, which was much enlarged and inflamed. I then diſſected *Poupart*'s ligament very clean; and though I raiſed up the edge of the gland all round with my finger, I could diſcover no appearance of a *hernial ſac*. I then cut into the ſubſtance of the gland, without being able to ſee any thing like a rupture. After this, I made an opening into the cavity of the *abdomen*, and preſently ſaw, that a very ſmall portion of the *ileon* had deſcended, and was ſtrangulated. The inteſtine above the ſtrangulated part was livid, where I made an inciſion into it, and found that I could paſs a blow-pipe or my finger, along the inteſtinal canal beyond the ſtrangulated part, and without interruption

tion from it. On diſſecting away the lymphatic gland, I ſaw that a ſmall portion of the inteſtinal tube, about the ſize of a hazelnut, had deſcended.

This caſe ſhews, that a fatal ſtrangulation may happen, though the whole circumference of the gut is not incloſed in the ſtricture. Another circumſtance perhaps worth remarking is, that in this caſe, an operation might have been begun, and perhaps quitted, without diſcovering the nature of the diſeaſe; for unleſs the ſurgeon had carefully diſſected away the gland, as I did after death, he could never have diſcovered the *hernia*.

XXXI. *An Account of the Effects of the* Cicuta, *and a Carrot Poultice upon a Cancer of the Breaſt, in a Letter from* Arthur Nicolſon, *M. D. Phyſician at* Berwick, *to* Richard Huck, *M. D. F. R. S. and Phyſician to* St. Thomas's *Hoſpital, and by him communicated to the Society. Read* November 5, 1770.

*Berwick*, 28th *Auguſt*, 1770.

Dear Sir,

AT your deſire, I ſend the particulars of the cancer in the breaſt as nearly as I can collect them from the notes which I kept.

Mrs. ——, aged forty-four, of a tender delicate habit of body, much ſubject to nervous complaints, coſtiveneſs, flatulence, irregular menſtruation, *fluor albus*, and to flying rheumatic pains. She is the mother of two children. The loſs of the eldeſt nine or ten years ago, afflicted her very much. The youngeſt is now ſixteen. Some of her family have died of a cancer.

About

About twenty years ago, Mrs. —— had a *ſcirrhus* in her left breaſt, which, after ſome years, diſperſed inſenſibly. She has been troubled for theſe five or ſix years with ſlight pains in the right breaſt, which were relieved by warmth and exaſperated by cold. The laſt ſpring ſhe was afflicted with a *ſciatica*, and the rheumatic pains were ſeverer than uſual. She bathed in the ſea for three or four ſummers with ſenſible benefit; but during the courſe of the ſea-bathing in *June* 1769, the pains in the right breaſt grew more violent, when ſhe diſcovered a hardneſs in it, and the ſkin ſeemed contracted, without any diſcolouration; for which reaſon ſhe gave up the bathing. Her pains now increaſed to ſuch a degree that ſhe could no longer conceal her ſufferings. I ſaw her firſt on the twenty-fourth of *Auguſt* 1769. The tumor was then hard, fixed to the ribs, and about four inches in diameter. The ſkin on the lower internal ſide of the breaſt, about three inches from the nipple, was of a deep purple, corrugated, but not ulcerated. I adviſed her to cover the breaſt with wool

and a piece of oil-cloth; and having no confidence in any medicine I had ſeen uſed, determined to give the *cicuta* a fair trial. The breaſt was fomented twice a day with a decoction of it, and ſhe took the extract in ſuch doſes as to affect her head. To relieve coſtiveneſs and flatulency, ſhe was occaſionally ordered ſmall doſes of the *tinctura ſacra*, with a ſtrong infuſion of the *cicuta*. The pains grew leſs, and the colour of the ſkin changed to a lighter red.

I begged of the friends to have more advice, and was deſired to conſult Doctors *Cullen* and *Gregory*. They approved of a continued uſe of the *cicuta*; changed the laxative for a ſaline one; but were afraid leſt the heat of the fomentation and oil-cloth ſhould haſten ulceration. However, we were under an abſolute neceſſity of having recourſe to the former to eaſe pain, and the patient would not give up the latter, of which indeed Dr. *Cullen* approved, when, on the twenty-eighth of *September*, he ſaw how it was applied. Dr. *Cullen*, as indeed every one would who had ſeen this deplorable caſe, concluded, that there was

no

no chance for recovery. He directed a mild ſolution of *ſaccharum ſaturni* to be applied externally; but this increaſed the pain and inflammation to ſuch a degree, that after once or twice trying it, we were obliged to deſiſt from the uſe of it.

Beſides the large tumor in the breaſt, there was now one of the ſize of a pigeon's egg in the *axilla*, and ſeveral ſmaller ones between theſe two tumors, ſome of them no larger than a pea, and ſome cutaneous, prominent and red.

In the latter end of *September*, the large tumor ulcerated, when I took the liberty to conſult you, and by your advice changed the extract for the powder of *cicuta*, and gradually increaſing the doſe to half a drachm, I brought her at laſt to take two hundred and ten grains in a day. This medicine generally relieved the excruciating pains. She likewiſe followed your directions in drinking plentifully of common cheeſe-whey, and new wort, in uſing the mildeſt diet, and in keeping her body open with *magneſia* and *rhubarb*.

Towards the end of *October*, the ulcer had ſpread very much, and the ſmell of it was ſo horrid, that ſhe declared that all her other ſufferings were trifling in compariſon with what ſhe felt from this cauſe; and though we were all convinced that the bare mention of amputation would kill her, yet ſhe propoſed it herſelf. When I conſulted you a ſecond time, you recommended a carrot poultice, which, to my great ſurpriſe, from the very firſt application, removed all the *fœtor*. The poor lady often in the moſt pathetic terms expreſſed her gratitude to you for it. The ulcer had now ſpread almoſt round the nipple, ſo that we looked for its dropping off at every dreſſing. The diſcharge was of that naſty ſlimy kind which comes from ſloughing tendons, and hanging out of the ulcer, adhered ſo firmly, that it was impoſſible to remove it without giving great pain. The lips of the ſore were thick, livid, hard, and jagged. The ſhooting pains, which often returned with great violence, were generally relieved by an increaſed doſe of the *cicuta*, though this medicine did not

ſeem

ſeem to make any change in the appearance or progreſs of the ulcer.

In *November*, ſhe complained more of flying pains about the *thorax*, and the *ſciatica* increaſed to ſuch a degree, that ſhe loſt the uſe of her left leg, and was confined to her bed. I tried bleeding, leeches, and bliſters to the hip, an iſſue below the knee, and many other means, with very little advantage.

Things being in this ſituation about the middle of *December*, I reſolved to make another trial of the external uſe of the *cicuta*. I injected a ſtrong decoction of that plant to clean the ſore, and then applied a poultice of the tops of the *cicuta* boiled, and of carrots; for I durſt not drop the uſe of them. The ſmell which this cataplaſm contracted was not in the leaſt diſagreeable; for the carrots certainly change the ſmell of the *cicuta*, as well as correct that of the ſore. In a few days the ulcer was quite clean and florid; the diſcharge perfectly good in colour and conſiſtence; the lips gradually acquired their natural complexion, grew ſoft, thin,

and

and even; the cavity filled up, and the *cicatrix* advanced ſo far, that from a ſore four inches broad and two inches deep, it in the ſpace of ſix weeks would not receive an almond. The large tumor in the breaſt, as well as that in the *axilla*, leſſened conſiderably, and divided into ſmaller ones. The pain went off entirely, ſoon after the firſt application of the hemlock with the carrots.

In the beginning of *February* 1770, ſhe was ſeized with violent fits of anxiety, *orthopnœa*, *globus hyſtericus*, and the moſt horrid *ſtridor dentium* I had ever heard; ſo that I really thought her teeth muſt have been ground to pieces. When ſhe recovered from the fit, ſhe ſaid this grinding of her teeth was to keep down the lump in her throat. Theſe fits were ſo ſevere, that we often thought her expiring. They laſted for a few hours at firſt, but increaſed gradually in length, till the fifteenth of *February*, when ſhe died in one of them.

Wherever the *cicuta* touched the ſkin, there came out ſuch a thick eruption, as to make one continued red inflamed ſurface.

This

This really frightened me; but as the ulcer looked well, and the breaſt felt cooler and eaſier, (this was her own expreſſion) than when the carrots were applied alone, and as I was encouraged to it by her brother, a very ſenſible worthy man, I continued the application. This appearance would go off in a few dreſſings, and return again in a few more; but no new ulceration followed, not even on the ſmall prominent inflamed tumors before mentioned. Both the cataplaſm and the breaſt were often covered with a thick white cruſt. At firſt, I thought this nothing more than the cuticle diſſolved by conſtant moiſture; but I afterwards obſerved, that it appeared as much at the dreſſing immediately after the breaſt had been waſhed, and ſcraped with an ivory folder, which it very often was, as at any other dreſſing; and as it was frequently only over the tumors, and always thickeſt over them, I conclude that it aroſe from tranſudation. It appeared from the firſt application of the carrots to the end.

I know how little we ought to depend upon a ſingle caſe, even where completely cured;

cured; but, from the wonderful change which happened in this, I am inclined to give more credit to ſome of Stork's caſes. I never ſaw, nor have I ever heard in Britain, of a painful, corroding, fetid, largely ulcerated cancer, brought ſo near to a perfect *cicatrix* as this was, where the knife had not been previouſly uſed. I ſhall, in future, be leſs afraid of the external uſe of the *cicuta*; nor indeed do I ſee any grounds of fear, when the matter produced is good; for then we may hope for a diminution of pain, and a reſolution of the tumor. I have ſeen the *cicuta* do good in ſome indolent tumors on the ſide of the neck, one of which was ſuſpected to have a cancerous diſpoſition. It ulcerated, but got well.

The *cicuta*, though it gave giddineſs, confuſion in the head, and eaſed pain, yet it never occaſioned drowſineſs or coſtiveneſs.

I am, *&c.*

ARTHUR NICOLSON.

XXXII. *An*

XXXII. *An Account of the Uſefulneſs of Wort in ſome ill-conditioned Ulcers, in a Letter from* Benjamin Ruſh, *M. D. Profeſſor of Chymiſtry in the College of* Philadelphia, *to Dr.* Huck, *and by him communicated to the Society. Read* November 5, 1770.

## CASE I.

A Woman aged twenty-three, was infected with the venereal diſeaſe by a bad huſband, for which ſhe had been ſalivated without any advantage. She had laboured under the diſeaſe two years, when I was deſired to ſee her. Her face, neck, ſides, and *regio pubis*, were covered with large ſpreading ſores. She complained at times of a difficulty of breathing, and was every now and then ſeized with acute pains in her bowels. This laſt ſymptom I looked upon as the mark of an *hypochondriaſis*, brought on by trouble of mind, and which I relieved by giving her nervous and antiſpaſmodic medicines. Her friends

urged me to attempt the cure of the venereal diſeaſe by throwing her a ſecond time into a ſalivation: but as I had ſeen *mercury* uſed more than once in ſimilar caſes without ſucceſs, I was determined not to torment my patient, or riſk my reputation, by preſcribing it in the preſent caſe. Inſtead of this, I deſired her to drink plentifully of *wort*, which ſhe prepared by pouring a quart of boiling water upon three or four ſpoonfuls of fine powder of malt, to which was added a ſpoonful or two of wine, and ſome brown ſugar. Of this liquor ſhe drank from one to three quarts every day. It gave me great pleaſure to ſee how obvious the effects of it were, in ſpeedily removing her diſorder.

The ſores healed firſt on her face, and then gradually on her body; her appetite grew better; her ſpirits revived; ſhe began to recover fleſh, and in leſs than a month, was perfectly cured, inſomuch that ſhe has not had the leaſt complaint of any kind ſince. It is now five months ſince ſhe appeared to be well. She took no medicine of any kind beſides the *wort*.

CASE

## CASE II.

A woman, after lying-in, was ſeized with a pain and ſwelling in the right *hypochondrium* immediately above the *os ilium*. The ſwelling ſuppurated, was opened by inciſion, diſcharged a bloody kind of *matter*; the ſore put on an ugly appearance; the fleſh around it was ſwelled, hard, and filled with finuſes. When I firſt ſaw her, I attempted the cure by the application of poultices, balſamic injections, and the like; but all to no purpoſe: ſhe grew worſe inſtead of better. I then ordered her to drink of the *wort*, prepared in the manner above-mentioned. She thought it very pleaſant, and drank it in ſuch large quantities as ſerved her both for food and drink. In a few weeks, the pain, ſwelling, and diſcharge leſſened. She ſlept ſound at nights, which ſhe had not done for many months before. But in order to complete the cure, it was found neceſſary to open one or two of the finuſes. This had the deſired effect, and ſhe is now in perfect health.

I have uſed this excellent remedy in ſeveral other caſes with advantage; but as I was obliged, in ſome of them, to give other medicines at the ſame time, I cannot ſpeak ſo clearly, as in the former caſes, of its uſefulneſs.

I acknowledge myſelf entirely indebted, for the hint of ever uſing this remedy, to a paper, which you was ſo kind as to read to me, of Mr. *Gibſon* ſurgeon in *Newcaſtle*, who had ſucceſsfully preſcribed *wort* in obſtinate and ill-conditioned ulcers.

XXXIII.

XXXIII. *Caſe of an inciſted Tumor in the Orbit of the Eye, cured by Meſſrs.* Bromfield *and* Ingram *Surgeons in* London, *communicated by* R. Brockleſby, *M. D. F. R. S. and Fellow of the College of Phyſicians,* London.

*To the* MEDICAL SOCIETY.

GENTLEMEN,

IF I could have prevailed on either of the ſurgeons by whom the following operation was performed in my preſence, to relate what they actually did for the patient, I ſhould not have undertaken to offer this ſketch of it to you: But having long expected ſome account from them in vain, I have determined to ſubmit the following hiſtory to your notice, leſt the remembrance of it, as is the fate of many other uſeful obſervations which occur in practice about this great city, ſhould be totally loſt and forgotten.

A laborious country man, of the pariſh of *Haſelmere* in *Surry*, was attacked ſeveral

years ago with a pain, and conſequent dimneſs of ſight in one of his eyes, which, however, continued long without particular attention to it, until about two or three years afterwards, he became quite blind of that eye, the globe being protruded far outwards, until almoſt the whole inner ſurface of the lower *palpebra* was turned inſide out, and came downwards over his cheek a very conſiderable way, making that diſeaſe which *Celſus* calls the ἐκτροπιον of the *Greeks:* "Vitium inferioris palpebræ quo parum ſurſum attollitur, ſed pendet, et hiat, neque poteſt cum ſuperiori committi."

Many ſurgeons, both in town and country, who were conſulted, diſſuaded him from ſubmitting to any operation, being apprehenſive, that his complaint, if not already cancerous, was very likely to become ſo by meddling with it *. He was therefore urged and injoined not to hazard the danger of any operation, where the pre-

* "Ex his eos, qui quaſi carcinoma habent, curare periculoſum eſt, nam mortem quoque ea res maturat." *Celſus, Capit. de Aegilope.*

ſent

ſent malady did not render life intolerable, but might be ſupported without farther inconvenience than the want of ſight in that eye, and its unſeemlineſs from being ſo far thruſt out of the ſocket.

The patient, however, was not to be diverted by ſuch reaſonings from going about from one ſurgeon to another, in hopes of a cure, till at length he came, recommended by Dr. *Thomas Leigh* of *Farnham*, to the care of Mr. *Dale Ingram*.

This gentleman having carefully felt the diſeaſed eye, imagined, on preſſure, he perceived a reſiſting fluid underneath, and was of opinion, it was contained in a cyſt detached from the lacrymal gland; and therefore gave encouragement to attempt his relief by an operation, the ſafety of which he wiſhed previouſly to ſubmit to *William Bromfield*, Eſq;

Mr. *Bromfield*, after examining the diſeaſed eye, agreed as to the probability of the propoſed operation, and performed it in the following manner, whilſt Mr. *Ingram* acted as aſſiſtant to him. In the firſt place, they covered the ſound eye with a handkerchief

tied round the head, and then compreſſed upwards the diſtorted *palpebra*, till it was brought as near as poſſible to its natural poſition; and thus it was held tight whilſt Mr. *Bromfield* cut through the integuments into the lower part of the orbit of the eye under the *adnata*, till an aperture was made ſufficient to introduce his finger behind the globe of the eye, ſo as by touch to be able to direct a ſharp-pointed ſcalpel, which perforated the ſubſtance underneath. Immediately a thin pellucid liquor was diſcharged, not far ſhort in quantity of a ſmall wine glaſsful. Here Mr. *Bromfield* pauſed, to give the patient a little water to cleanſe his mouth from the blood, and obſerved, that his buſineſs was not more than half done, until he could extract the cyſt which had contained the water: He therefore introduced two ſmall hooked inſtruments to catch hold of it, and took it completely out. The wound in the orbit was filled with lint and dry dreſſings, and theſe were ſecured by a proper bandage; but yet, within leſs than twenty-four hours, the patient's head and neck, a great way down that ſide, were

ſwelled

ſwelled or inflated to a prodigious ſize. This ſymptom, however, was, after ſome time, removed, by enlarging the wound, and dreſſing it only very lightly with dry lint, and by a few gentle purges; ſo that thus treated as a common ſuperficial wound, in leſs than a month the whole was healed, and the poor man was ſent home perfectly ſatisfied. Mr. *Ingram* was all along, even before the operation, confident, that the overſtretched muſcles and ligaments of the eye would, in time, recover their natural poſition, that the globe of the eye itſelf would conſequently be included within its ſocket without leaving any outward blemiſh, and that even the ſight would return to a certain degree in that eye. I own I gave not much credit to all this, till five months after the man went home, when being at *Haſelmere*, I ſent for him to ſatisfy my curioſity. When I ſaw him there, I ſcarce knew him again; for his eye-lid had fully recovered its natural tone, poſition, and functions; and he told me, that for about a month before that time, he began to be ſenſible in that eye of the difference between darkneſs

and bright ſunſhine, and that ever ſince, he found that kind of perception gradually ſtrengthened.

I am deſirous to preſerve the remembrance of this caſe among your Obſervations, having conſulted ſeveral ancient as well as modern writers in ſurgery without finding one exactly ſimilar in theſe authors, except a ſingle caſe mentioned by *St. Yves*, which indeed led to conjecture what the nature of the diſeaſe and cure were in the preſent caſe.

I am, *&c.*

*Norfolk Street,*
15th *October*, 1770.

RICHARD BROCKLESBY.

## XXXIV. *Two Letters on the* Varicoſe Aneuryſm, *from Mr.* W. White, *Surgeon at* York, *to* William Hunter, *M. D. F. R. S. and by him communicated to the Society.*

Dear Doctor,

IN obedience to your deſire, that your pupils would communicate any material or uncommon appearance, which might occur in their practice, I have ſent you a caſe of a diſeaſe, which, I am apt to believe, is not very uncommon. You have greatly obliged the world in being the firſt diſcoverer of its true nature; no one before ſeems to have made any probable conjecture towards it; for which reaſon, I flatter myſelf that this communication will be acceptable.

A young man, about twenty-eight years of age, footman to a gentleman in this city, came to me to be bled: this he deſired me to do in his left arm, ſaying, that the vein in his right arm had been cut through as he imagined, and could never be opened

ſince. I immediately deſired him to ſhow me his arm, which he did. The baſilic vein was enlarged to three times its uſual ſize, and throbbed violently. On applying my finger to it, I was ſenſible of a certain tremulous motion and thrilling noiſe, not only in the part immediately diſeaſed, but up the arm, in the courſe of the vein, to the *axilla:* I inſtantly recollected your paper on the *aneuryſmal varix*, in the *Medical Obſervations*, and found it evidently to be the ſame diſeaſe. The brachial artery is much enlarged; its pulſation evident from the *axilla* to the affected part; the pulſe at the wriſt of the diſeaſed arm is ſenſibly weaker than in the other.

On pinching up the diſeaſed vein, the coats of the artery are diſtinctly felt through it; and I am ſo ſenſible of the part where the hole by which the artery and vein communicate is ſituated, that I am certain I could run a pin through it. When the humeral artery is compreſſed, the thrilling noiſe ceaſes, but returns again with double force upon taking off the preſſure. I could not perceive either the thrilling, or any pulſa-

tion

tion in the median or cephalic vein, though they are both of them enlarged. On applying my ear to the tumefied baſilic vein, the pulſation, tremulous motion, and noiſe, are diſtinctly perceived. He is very ſenſible of the thrilling noiſe himſelf, eſpecially on reſting his head upon the hand, or when he chances to lie upon it with his head in bed.

It was cauſed by bleeding, about ten years ago. Being ill, he got ſome perſon to do the operation that uſed to bleed for a trifle in a country village. He remembers that it hurt him very much; ſo that he ſays it muſt have been done with a broken or ruſty lancet. His arm, for a large ſpace about the puncture, grew quite black, and he was obliged to have it fomented for ſome time; it at length healed, came to its natural colour, but has been ever ſince in the way above deſcribed.

If you deſire to be better informed of any particular of the caſe, I will readily endeavour to do it. I am, *&c.*

*York*, 8th *June*, 1769.

W. WHITE.

*P. S.*

*P. S.* The young man, I believe, will be in *London* in the beginning of next winter, as his maſter intends to reſide there; ſo that, if it be agreeable to you, I can, perhaps, give you an opportunity of examining him yourſelf.

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## LETTER II.

*York*, 30th *November*, 1770.

Dear Doctor,

THE young man with the *varicoſe aneuriſm*, is at this time ſervant in a family reſiding in *York*. I ſent this afternoon to deſire to ſee him at my houſe; he accordingly came, and I ſent for Mr. *Brown*, a ſurgeon of eminence, and near neighbour of mine, to obſerve the caſe.

The patient has a remarkably large ſyſtem of blood-veſſels; his veins in general lie ſuperficially along his arms, ſo as to appear very blue and exactly defined.

In conſequence of which, the diſorder was amazingly evident, and perceptible upon the ſlighteſt touch of the diſeaſed vein.

vein. The peculiar kind of thrilling motion was very diſtinctly felt for ſome diſtance, both above and below the hole of communication.

The place of communication was ſo eaſily perceived, that I am confident I could introduce the point of a needle exactly through it into the artery: it is ſurrounded with a part more prominent than the reſt, being, I ſuppoſe, the *cicatrix* formed by the contact of the vein with the artery. The ſtream of blood propelled at every pulſation into the vein, is diſtinctly felt with the finger.

The diſeaſed vein is conſiderably enlarged, though not more ſo now than when I firſt ſaw it. I cannot perceive that the pulſation of the artery in the wriſt of the diſeaſed arm, is at all weaker now than in the other arm.

He has ſome thoughts of going to *London* in the ſpring; if he does, he promiſes to inform me; at which time I ſhall not fail of procuring you a ſight of him.

If theſe few obſervations prove ſatisfactory, it will be a great pleaſure to, *&c.*

W. WHITE.

## XXXV. *A Letter from Mr.* Thomas Armiger *Surgeon, to* William Hunter, *M. D. F. R. S. on the* Varicoſe Aneuryſm, *communicated with a Poſtſcript by Dr.* Hunter.

IF you think the following hiſtory of a *varicoſe aneuryſm* worthy the attention of the Medical Society, your communicating it will afford me a particular pleaſure.

*Mary Stevens*, aged twenty-three, applied to me laſt *November*, on account of a ſwelling in the bend of her right arm, which ſhe diſcovered within a few days after being bled by a female operator, about a month before I ſaw her. At firſt glance I perceived the baſilic vein (and that only) pretty uniformly tumefied, about three inches in length, with a very ſtrong pulſation in it. On touching the tumor very lightly, I felt a tremulous, thrilling motion, moſt diſtinguiſhable at the place where the vein had been punctured, and gradually decreaſing towards each extremity of the tumor.

tumor. By making a ſtrong preſſure with my finger on the *cicatrix* of the vein, the pulſation and thrilling entirely ceaſed. I immediately recollected the caſes I had read, in the *London Medical Obſervations*, of that particular kind of *aneuryſm*, where a free communication had been preſerved between the punctured vein and artery; and from every experiment I have made, am fully convinced of the certainty of it in this caſe; for, on compreſſing the humeral artery any where above the tumor, the pulſation and thrilling entirely ceaſe, and the vein becomes flaccid; but is inſtantly filled with a guſh from the artery as ſoon as the preſſure is taken off. A tight ligature applied below the tumor, does not prevent either the pulſation, thrilling, or diſtenſion of the vein. The ſize of the tumor is conſiderably increaſed by compreſſing the vein only *above* its enlargement; and much more ſo, when the arm is raiſed than when it is hanging down.

In this caſe, the humeral artery is not perceptibly dilated, and the pulſation, both in this and the radial artery, dffers very little

little from that in the other arm, owing, I imagine, to the baſilic vein alone being dilated, and that to no very great extent. When the patient lies down on her right ſide, ſhe feels a numbneſs, and ſenſe of fulneſs, from the ſhoulder to the fingers ends of that arm, and hears both the pulſation and thrilling, if ſhe reclines her head upon it; which I never could diſcover, unleſs my ear or hair touched the tumor, or the communication between them was kept up by ſome intermediate body.

I have frequently ſeen the young woman ſince the accident, and have not found the tumor to increaſe theſe laſt four or five months; but have put her into a way to guard againſt the conſequences which would ariſe, if it ſhould by any means (as ſhe is a ſervant) burſt; though, from all the hiſtories of this caſe yet known, I hope little danger is to be apprehended.

I remain, *&c.*

*Queen Street, Cheapſide,*
30th *November*, 1770.

THOMAS ARMIGER.

*A Poſt-*

## *A Poſtſcript to the preceding Caſe of the* Varicoſe Aneuryſm, *by* William Hunter, *M. D. F. R. S. addreſſed to the* MEDICAL SOCIETY.

GENTLEMEN,

ON *Sunday* ſevennight Mr. *Armiger* was ſo obliging as to give me an opportunity of ſeeing the young woman, the ſubject of the preceding hiſtory, in company with Dr. *Crell*, profeſſor of chymiſtry at *Helmſtad*, Mr. *Hewſon*, &c. We were all ſatisfied that the caſe was clearly and exactly what Mr. *Armiger* has deſcribed. In making various trials by ligature and compreſſion, there was a very diſtinct phænomenon, which demonſtrated to the eye-ſight the communication between the artery and the vein, more diſtinctly than in the other two caſes of the *varicoſe aneuryſm*, which I had ſeen. When a ligature was applied tightly round the arm, a little below the tumefied part of the vein, to prevent its receiving the refluent venous blood in the ordinary way of the circulation, and

then a ſtrong compreſſion made upon the artery a little above the tumor; in this ſtate, I ſay, when the blood was preſſed up by the fingers along the vein, there was no appearance whatever of any diſeaſe in the part; and upon taking off the preſſure from the artery in this laſt ſtate, the vein ſwelled out, almoſt inſtantaneouſly, by the guſh of blood thrown into it from the artery. So far this caſe was like all others of the *varicoſe aneuryſm* that have been hitherto known. But the peculiar circumſtance was this, that when the guſh of blood came from the artery againſt the inſide of the empty and collapſed vein, which was covered at that place with a very thin ſkin, it raiſed or puſhed out that particular part of the vein, before the reſt was ſenſibly filled, exactly as if it had been puſhed out by throwing ſome ſmall body againſt it from the inſide: and that firſt puſh of the arterial blood was always preciſely at the *cicatrix*, where the vein had been opened in bleeding. This appearance we all ſaw again and again, diſtinctly and ſatisfactorily.

You have now the pleaſure, gentlemen, of ſeeing, in your own collection, *five unqueſtionable* inſtances of a diſeaſe, which before was not ſo much as imagined to exiſt: and I have the ſatisfaction to find, that the opinion which in the firſt caſe was formed of the nature of the diſeaſe, the prognoſtic which was made, and the treatment which was recommended, are ſupported by all the experience which we have yet had.

*December 3d,*
1770.

W. H.

XXXVI. *The Hiſtory of a fatal Inverſion of the* Uterus, *and Rupture of the Bladder, in Pregnancy, by Mr.* John Lynn, *Surgeon at* Woodbridge *in* Suffolk, *communicated with an Appendix, by* William Hunter, *M. D. F. R. S.*

AS inſtances of the *inverſio uteri* may have occurred to phyſicians and ſurgeons, though perhaps the diſeaſe was not perfectly diſcovered till it was too late to give relief; and as others, though clearly diſtinguiſhed, and judiciouſly treated, have not been ſo ſtrictly conſidered, or at leaſt ſo fully communicated as they ought to have been, it is hoped the following narrative of facts, as they appeared in a caſe attended with ſome ſingular circumſtances, with a ſincere wiſh of reflecting the leaſt light upon a ſubject of great importance, though hitherto little known, will meet with a candid reception.

*September* 22, 1767. A poor woman, about forty years of age, of a lax habit, mother of ſeveral children, fourteen or fifteen

fifteen weeks advanced in pregnancy, was ſeized with ſevere pain about the belly, extending towards the *vagina*, occaſioned, as ſhe imagined, by a *prolapſus vaginæ*, to which ſhe had, at intervals, been ſubject a conſiderable time; and although hitherto eaſily reduced by herſelf in an horizontal poſture, it could not now be replaced: an almoſt entire ſuppreſſion of urine and ſtools was the immediate conſequence. On the twenty-fourth, an emollient fomentation, an anodyne emulſion, and a clyſter, were preſcribed. On the twenty-fifth, the clyſter was repeated, the firſt having had no effect. The fomentation and emulſion were continued, and gentle diuretics and laxatives adminiſtered to the twenty-ſeventh, from which ſhe had ſtools, and paſſed ſome urine in ſmall quantities and with uneaſineſs. The *prolapſus* was reduced, and the pain much alleviated till the third of *October*, when ſtooping down to glean corn in an adjacent field, ſhe felt (as ſhe expreſſed it) "ſome-"thing ſuddenly give way at the bottom "of her belly, and fall down towards her "back." The ſymptoms immediately re-

turned without the *prolapſus*. I now ſaw her for the firſt time, (as ſhe lived at a conſiderable diſtance from me) accompanied by Mr. *Syer*. She was in great pain, had a total ſuppreſſion of urine and ſtools, attended with *nauſea* and *teneſmus*: we ordered the ſame means to be perſiſted in; but they were now ineffectual. Clyſters could not be injected or retained except in ſuch ſmall quantities as were inſufficient to have any good effect: ſeveral attempts were made to paſs the different kinds of catheters, but it was found impracticable, in every poſition we could think of, to introduce any one more than an inch or two into the *urethra*, without drawing off any water. From an imperfect idea and recollection of the caſe of an inverted *uterus*, communicated by Dr. *Hunter* to his pupils, at lecture on the twenty-firſt of *October* 1754, I ſuſpected this to be of the ſame nature; and being very deſirous of inveſtigating the true cauſe, I was confirmed in my ſuſpicion by paſſing a finger up the *vagina*, which was puſhed towards the *oſſa pubis* by a tumor (as big as a ſmall child's head) lying behind

behind the *vagina*, almoſt in *perinæo*; ſo likewiſe, it was found impoſſible to paſs the finger any length up the *rectum*, the ſame tumor preſſing ſtrongly on that bowel. Theſe circumſtances determined it to be the *fundus uteri*: and it more plainly appeared to be ſo, as the *os uteri* could not be felt in the *vagina*, notwithſtanding the finger eaſily paſſed beyond the tumor as far as it could reach. Many efforts were made to reduce the *uterus*, by placing the woman on her knees and elbows, with her head downwards; and by introducing one hand up the *vagina*, attempting to draw it forwards, at the ſame time, with two fingers of the other hand *in ano*, we endeavoured to puſh up the *fundus uteri*, according to the method recommended and attempted by Dr. *Hunter*, and the ſurgeon who deſired his advice. Repeated trials were again made to paſs the catheter, eſpecially in thoſe poſitions which appeared moſt likely to favour its paſſage, but without ſucceſs. On the fifth, finding her much in the ſame ſtate, the *ſemicupium* was judged proper, and the ſame methods were once more attempted in

vain. The catheter indeed ſeemed to paſs rather farther up the *urethra*, and repeatedly drew off a ſpoonful or two of deep-coloured urine, ſometimes in one poſture, ſometimes in another. The next day, we popoſed puncturing the bladder above the *oſſa pubis*, as the laſt reſource and only hope remaining; but upon urging it, and explaining the nature of it to her, the poor woman ſtrenuouſly oppoſed it, determining rather to ſubmit to fate. On the ſeventh ſhe was much weaker, had frequent and ſevere *nauſea* and *ſingultus*, the ſad prelude to gangrene and death; and, while Mr. *Syer* was in the chamber, ſhe called him to the bed-ſide, and (to uſe her own words) ſaid, "She felt at that inſtant ſome-"thing burſt within her," and an immediate relief from pain, telling him, ſhe was certain ſhe was going to miſcarry; which accordingly happened immediately, with very little pain or diſcharge; the membranes being ruptured, the *fœtus* and *placenta* were entirely delivered by the natural effort, the poor woman expreſſing the higheſt ſenſe of joy, and begging Mr. *Syer* to deſiſt

from

from giving himſelf or her any farther trouble; but upon his urging the neceſſity of drawing off the water, ſhe reluctantly ſubmitted, and he immediately, and with the greateſt facility, paſſed the catheter into the bladder, but without evacuating any urine. This circumſtance confirmed Mr. *Syer* in his conjecture, that the ſenſation ſhe felt immediately preceding the abortion, was occaſioned by the rupture of the bladder. No hope of affording her any aſſiſtance now remaining, light cordials and nouriſhment were frequently given her; but ſhe ſunk faſt, and died early the next morning.

Mr. *Syer* got leave of the friends to open the body in the huſband's abſence, but was obliged to do it haſtily. About nine or ten pints of urine was found in the *abdomen*, the bladder empty and flaccid, which being inflated by the catheter through the *urethra*, appeared ruptured near its *fundus*, enough to admit the end of the finger, and about the breadth of a ſhilling round the aperture; it was in a gangrenous ſtate. The whole body of the *uterus* was reflected ſo much back-

backward, as not eaſily to be diſcovered, the *fundus uteri* lying between the *vagina* and *rectum*, and the *os uteri* towards the *oſſa pubis*, without any farther extraordinary appearances.

As the violent preſſure of the *collum uteri et veſicæ* (conſiderably retracted from their natural ſituation) upon each other, againſt, or rather above the *oſſa pubis*, was the true cauſe of the ſuppreſſion of urine, and what prevented the paſſage of the *catheter* into the bladder; would opening the *uterus* at its *fundus* through the *vagina*, with a proper inſtrument, and diſcharging the liquor *amnii*, &c. as judiciouſly propoſed by Dr. *Hunter* in the caſe he met with, (where the catheter was eaſily paſſed and the bladder evacuated, and where the ſuppreſſion of urine was evidently dependent upon a very different cauſe, namely, the preſſure of the tumor in the *vagina* upon the *urethra*) have been adviſable or available here? Would ſuch an operation have facilitated the diſcharge of urine from the diſtended bladder? and, without this, was it poſſible that the *uterus*, ſo firmly

engaged

engaged and wedged in the *pelvis*, and ſo forcibly born down with the vaſt weight above it, could have been reduced? Might it not have been more eligible in this caſe, where no urine could be drawn off, firſt to have punctured the bladder above the *oſſa pubis*, that by this means the water being evacuated, and the preſſure removed, the *uterus* might then poſſibly have been reduced, or that having ſtill remained impracticable, the *uterus* might at laſt have been opened, and probably replaced.

It was impoſſible for this woman to have miſcarried till the bladder was emptied; but the event ſhows, that abortion immediately ſucceeded the rupture of the bladder, the parts being now relaxed, and the *fundus uteri* probably in ſome meaſure raiſed up by the removal of the preſſure and diffuſion of the urine: and is not this an argument in favour of the probability there might have been of ſucceſs from the puncture of the bladder? Yet, if we conſider the dangerous conſequences to be apprehended from ſuch operations, and all other circumſtances, it appears highly doubtful

or improbable, that either or both theſe operations would have effected the deſired intention; or at leaſt, that the event would have been happy: however, as they appear to be the only means left, at leaſt the moſt probable in ſo deſperate a condition, they may perhaps deſerve future conſideration and trial.

Dr. *Hunter* tells us, if this caſe is diſcovered ſoon after it happens, that it may be reduced by the method above-mentioned; but that when the *uterus* is inverted, it will always remain ſo, unleſs relieved before the *fœtus* becomes ſo large and the *uterus* ſo diſtended, as to lock itſelf up in the *pelvis*; at which time, and not before, the mother begins to feel exquiſite torture.

Dr. *Hunter* has lately kindly informed me, that he has met with ſeveral caſes ſince that which he related to us at lecture, but by proper management in time all did well.

Whatever might have been the immediate cauſe of this misfortune, does it not appear from the general habit and previous *prolapſus vaginæ*, that relaxation in general;

and

and particularly of the uterine ligaments and appendages, was the grand prediſpoſing cauſe? But as it may be difficult to determine theſe and other points above-hinted at, they are humbly ſubmitted, with all due deference, to the farther conſideration of the ingenious and learned.

Had we not been convinced by the moſt indiſputable facts, that the catheter was conſtantly paſſed into the *urethra*, by feeling the end of the inſtrument while in the *urethra*, and endeavouring to puſh it gently upwards into the bladder, and by repeatedly drawing off ſmall quantities of urine, we might have been inclined to ſuſpect that we had been deceived, and perhaps imagined that we had been foiled in our attempts, by the retraction of the *meatus* under the *oſſa pubis*, and the preſſure of the tumor in the *vagina* againſt the *urethra*; but the *meatus* was clearly and diſtinctly felt under the *ſymphyſis* of the *oſſa pubis*; and the tumor in the *vagina*, though it conſiderably diminiſhed its diameter, particularly in its inferior part towards the *os externum*, did not in the leaſt preſs upon the

*urethra*, nor made any obſtruction to the free and eaſy paſſage of the finger between it and the *pubis*; and, conſequently, was no obſtacle to the introduction of the catheter. This obſtacle was much higher up, and always impaſſable at a certain point, from the exceſſive and ſingular ſort of preſſure of the *uterus* and bladder upon each other, forcing the latter to become as it were pendulous over the *oſſa pubis*, and to form an acute angle with the *urethra*, occaſioning ſuch an invincible obſtruction, as, although it admitted a ſmall quantity of urine, to inſinuate itſelf into the *catheter* from above it, would by no means admit that inſtrument to paſs it from below.

If we appeal to our own experience and obſervation, and credit the aſſertions of the learned *Van Swieten* (in his Commentaries upon the *aphoriſms* of the illuſtrious *Boerhaave*), and thoſe of a celebrated *Dutch* artiſt, whom he has quoted, we ſhall find that it has ſometimes been extremely difficult where the *uterus* has been remarkably prominent and pendulous over the *oſſa pubis*, to paſs the catheter into the bladder from

from this *viſcus* forming an angle with its own neck: but in the above caſe, the unnatural ſituation of the *uterus*, &c. and the moſt violent and ſingular kind of preſſure, and the exceſſive conſtriction upon the bladder, all concurring, formed ſo acute an angle as to render that operation impracticable. Perhaps a flexible catheter, or one of a particular conſtruction might have anſwered here; but as I had not ſuch an inſtrument, ſo I muſt confeſs I did not at that time think of it.

May not this caſe more properly be termed an *hernia*, or *reflectio uteri*, in contradiſtinction to the true *inverſio uteri*, which has too often been the miſerable conſequence of the premature and violent extraction of the *placenta*?

*September* 5,
1770.

*An Appendix to the preceding Article, by* William Hunter, *M. D. F. R. S. addreſſed to the* MEDICAL SOCIETY.

GENTLEMEN,

The lecture to which Mr. *Lynn* alludes in the preceding hiſtory, was read in *October* 1754, to a number of gentlemen of the faculty, as well as ſtudents. The meeting was intended to be as public as the nature of the caſe would permit; both that ſo ſingular, inſtructive, and important a caſe might be more generally known, and likewiſe, that any obſervation or diſcovery which I had made on the ſubject of the gravid *uterus*, might be well authenticated. Whenever I have had any opportunity of that kind, you know, that I have taken ſome method of ſending out a very general invitation.

This particular caſe will be better underſtood when I ſhall have publiſhed the figures of the gravid *uterus*. It is the ſubject of a large plate in that work. In the mean time, as you are pleaſed to think, that what I ſaid upon that occaſion, might illuſtrate

ſtrate Mr. *Lynn*'s obſervations, and that humanity pleads for having the caſe of the *retroverted uterus* * more generally known among practitioners than it appears even now to be. Though I have not at preſent leiſure to write upon any ſubject with that care which I think is due to the public, I chearfully offer the ſubſtance of that lecture to your diſpoſal, with a reflection or two which opportunity and experience have ſuggeſted to me ſince that time.

" A young woman, about four months advanced in her firſt pregnancy, after a fright, was taken ill, and could not, without great difficulty, go to ſtool or make water. Her complaint grew worſe daily, till on *Saturday* the twelfth of *October* both theſe evacuations were entirely ſuppreſſed. The ſuppreſſion of urine continued, without any relief being given, till *Thurſday* the ſeventeenth, when Mr. *Walter Wall* ſurgeon was called to her aſſiſtance. He drew off, by the catheter, about ſeven

* This caſe has been called the *inverſion* of the *uterus*; but as the term is equivocal, we may be allowed to introduce the word *retroverſion*.

or eight quarts of urine. He then attempted to throw up a clyſter; but very little paſſed up, and it had no manner of effect. In the afternoon, about three quarts of urine tinged with blood were drawn off by the catheter.

In order to diſcover the cauſe of theſe ſymptoms, Mr. *Wall* introduced a finger into the *vagina*, which could not paſs up on account of a large tumor that lay behind the *vagina*, and preſſed it cloſe to the inſide of the *oſſa pubis*. As there was not room to paſs the finger, he could neither reach the extremity of the *vagina*, nor could he diſcover any thing like the *os uteri*.

After this he examined the *rectum*, and found, that the ſame tumor, which lay above or before the gut, preſſed it ſo ſtrongly againſt the inſide of the *os coccygis*, &c. that the finger could only be paſſed a very little way.

Theſe circumſtances made Mr. *Wall* recollect a caſe of a retroverted *uterus* which Monſ. *Gregoire* had given in his lectures at *Paris*. He then concluded, that this was a

caſe of the ſame nature, and attempted to reduce the *uterus* by laying the patient on her back, and by aſſiſting, with one finger in the *vagina* and another in the *anus*, as Monſ. *Gregoire* had directed; but without any ſucceſs.

The poor young woman continuing in great pain, Mr. *Wall* came to me on *Saturday* the nineteenth, gave me an account of what had paſſed, and deſired me to viſit her with him. We found her exceedingly weak, and ſuffering great pain. She was lying upon her back. I paſſed my finger between the tumor and the inſide of the *os pubis*, a little to one ſide of the *urethra*; upon which a conſiderable quantity of urine was diſcharged, as my finger removed the preſſure upon the *urethra*. We then propoſed a ſecond attempt to reduce the *uterus* to its natural ſituation; for which purpoſe, we placed her upon her knees and elbows, with her head and ſhoulders as low as poſſible. Then I introduced one hand into the *vagina*, and two fingers of the other into the *anus*, and endeavoured to replace the *uterus*, by puſhing it up with the two fingers, and

at the ſame time, by trying to draw down the upper part of the *vagina*, which was conſiderably retracted from its natural ſituation. But theſe attempts were all in vain: ſhe became weaker every hour, and died on the *Monday* following.

On *Wedneſday* we were allowed to open the body. Upon cutting into the *abdomen*, we found the bladder amazingly diſtended with urine, and filling up almoſt the whole anterior regions of the *abdomen*, like the *uterus* in the laſt months of pregnancy.

When the urine was diſcharged by opening the bladder, we obſerved that the lower part of the bladder, which is united with the *vagina* and *cervix uteri*, and into which the *ureters* are inſerted, was raiſed up as high as the brim of the *pelvis*, by a large round tumor, *(viz.* the *uterus)* which entirely filled up the whole cavity of the *pelvis*. We then paſſed a catheter up the *vagina*, and obſerved, that it raiſed up the bladder at the top of the tumor; a demonſtration that the upper end of the *vagina*, and conſequently the *os uteri*, was ſituated there: and, upon making a crucial inciſion through

through the bladder and *vagina* at that place, we found that it actually was ſo. The *os uteri* made the ſummit of the tumor upon which the bladder reſted, and the *fundus uteri* was turned down towards the *os coccygis* and *anus*. The *uterus*, in that *retroverted* ſtate, was grown ſo large, and thence ſo wedged in the *pelvis*, that we could not take it out till we had cut through the *ſymphyſis* of the *oſſa pubis*, and torn thoſe bones conſiderably aſunder, to enlarge the ſpace within the bones of the *pelvis*, &c. &c.

It is hard to ſay what was the cauſe of this unfortunate poſition of the womb; for I cannot think it was the effect of a fright. Whatever was the cauſe, had the caſe been known ſoon after the unnatural ſituation of the *uterus* took place, that part might have been eaſily replaced by the method above-mentioned. But whenever the impregnated *uterus* is once thrown into that unnatural poſition, and continues in it ſome time, it will probably always remain ſo, unleſs reduced by art before it becomes ſo bulky as to be locked in the graſp of the *pelvis:* and, in proportion as this proceſs

advances, the diſcharge both of urine and of ſtools will become more difficult, and at length both will be entirely ſuppreſſed. When ſuch ſuppreſſions once begin, they aggravate the evil, not merely by cauſing pain, but by occaſioning a load of accumulated urine and *fæces* in the *abdomen* above the *uterus*, which preſſes it ſtill lower in the cavity of the *pelvis*; at the ſame time that the diſtention of the bladder, in this ſtate, draws up that part of the *vagina* and *cervix uteri* with which it is connected, ſo as to throw the *fundus uteri* ſtill more directly downwards.

The following queſtion riſes from the nature and unhappy event of this caſe; Whether it would not be adviſeable in ſuch a caſe, to perforate the *uterus* with a ſmall trocar, or any other proper inſtrument, in order to diſcharge the *liquor amnii*, and thereby to render the *uterus* ſo ſmall and ſo lax, as to admit of reduction? If other methods ſhould fail, I think ſuch an operation ſhould be tried. But this unhappy woman's health was ſo impaired by the great diſtention of the bladder, and ſuch long

long continued miſery, that, had it been done in the time that I viſited her, ſhe would have died, perhaps, under the operation; at leaſt, in all probability, ſhe could not have lived to reap any great benefit from it: and, as the caſe appeared to me to be ſo deſperate, I thought it moſt adviſeable to keep her quiet with opiates, and to give her the little comforts which cordials and humanity afford in the laſt hours of life. However, in ſo deplorable a caſe, I deſired that Mr. *Wall* would procure the opinion of ſome gentleman of the profeſſion, who had more experience than either of us. He did ſo; but it was determined that nothing could be done to ſave her."

Since the time of communicating theſe obſervations in a public lecture, I have known ſeveral caſes of the ſame nature, but in a leſs advanced ſtate. They all happened about the third month, ſooner or later; and they all brought on a difficulty, and gradually a ſuppreſſion, firſt of urine, and then of ſtools likewiſe. They were all ſucceſsfully treated in the following manner: After the caſe was ſuſpected from the

ſuppreſſion of urine, and then certainly known by the examination with the finger, both in the *vagina* and in the *rectum*, the urine was firſt completely drawn off by the catheter, then a ſufficiently ſtimulating clyſter was thrown up; and after the bowels were well emptied, it was always found eaſy to replace the *uterus*. In one inſtance, the *uterus*, of itſelf, recovered its natural ſituation, immediately after the above-mentioned evacuations had taken place. In another caſe, there were ſeveral relapſes before the *uterus* grew ſo large, that it could no longer fall back.

While there is reaſon to apprehend the *retroverſion* of the *uterus*, we may preſume that it will be favourable to be frequently in a recumbent poſture, and to take care that the bladder be never much diſtended with urine, nor the *rectum* and *colon* much loaded with *fæces*.

In the laſt place, gentlemen, give me leave to tell the public why you thought ſome account of the *retroverted uterus* ſo neceſſary: You were well aſſured that it happens frequently, and yet that a number

of practitioners know but little of it; ſo little indeed, that, as you well know, in this town, within theſe two years laſt paſt, two pregnant women loſt their lives by this accident, without the cauſe of their complaints being diſcovered till after death. In both of theſe caſes, the ſymptoms alone were almoſt ſufficient to determine the nature of the complaint; and the circumſtances of the tumor with regard to the *vagina* and *rectum* ſuch, that it would now appear to be impoſſible that an experienced practitioner ſhould miſtake the caſe. Yet, in both of theſe inſtances, experienced practitioners failed; and ſaw with regret in the dead body, what they might have eaſily cured in the living, if they had made a very obvious diſcovery in a proper time.

XXXVII.

## XXXVII. *An Account of a ſimple Fracture of the* Tibia *in a pregnant Woman, in which Caſe the* Callus *was not formed till after Delivery: By Mr.* Edward Alanſon, *Surgeon at* Liverpool: *Communicated by* William Hunter, *M.D. F.R.S. Read 4th* September, 1769.

*April* 28th, 1769.

A Woman aged twenty-two years, was admitted into the *Liverpool* infirmary with the *tibia* fractured obliquely in that part, where four times in five caſes it always breaks, for reaſons, which, on examining the bone, are obvious. She was of a delicate lax habit, and now ſuppoſed herſelf to be in the ſecond month of her pregnancy. She was properly treated, under Mr. *Pickering*'s directions, in conſequence of which, all tenſion and tumefaction diſappeared, and the limb was quite cool and eaſy. At the termination of a fortnight from the time of the accident, on parti-

particular examination, the fracture appeared more looſe than it ought to be; and, at the end of the third week, was exactly in the ſame ſtate. It did not appear probable, that the want of union could be owing to conſtitution, as ſhe had, only three months before impregnation, been very happily and ſpeedily cured of a fractured femur, by another ſurgeon; and this appeared the more improbable, as ſhe was a ſober temperate woman: and was it not more reaſonable to ſuppoſe, that the want of union depended upon the pregnant ſtate, than that it was cauſed by the interpoſition of any of the ſoft circumjacent parts? She was now informed that the event of the caſe was precarious; that it was dubious whether a cure could be obtained until ſhe was delivered, and patience with ſubmiſſion was recommended. It was thought right to ſtrengthen her conſtitution, and take all poſſible care of her general health. Hence the *cort. peruv.* was given, and its doſe increaſed from time to time, until ſhe took an ounce each day; and this was regularly perſevered in for the

ſpace

ſpace of ſix weeks; at the expiration of which all remained juſt in the ſame ſtate as before. She was now ſeized with a feveriſh indiſpoſition, which continued eight days: ſhe did not appear to be injured by it, unleſs being rather reduced in ſtrength. She now requeſted to be removed from the hoſpital, after which I gave her all neceſſary attendance, and was deſired to attend her at the time of delivery. She went on very well in regard to her pregnancy, and there was no alteration in the limb, excepting that it grew very œdematous. At the expiration of the ninth month of her pregnancy, and the ſeventh from the accident, ſhe was delivered; and, as ſhe recovered ſtrength, the œdema went off, and the bone began to unite: in ſhort, in about nine weeks from her delivery ſhe was able to walk about the room, and ſoon had a very firm and uſeful limb.

We cannot with certainty promiſe to cure fractures in the moſt favourable ſubjects; for our endeavours may be fruſtrated by the interpoſition of the ſoft circumjacent parts. The moſt remarkable inſtance of this kind, is that

publiſhed

publiſhed by Mr. *White* of *Mancheſter*. I ſaw an inſtance in the *tibia*, in which the want of union was ſuppoſed originally to have been owing to this cauſe. On diſſecting the limb after amputation, there was no appearance of any interpoſed part. The extremities of the fracture were incruſted over with a truly cartilaginous ſubſtance; hence a kind of articulation was formed, which allowed of conſiderable motion. In other caſes we may fail from conſtitution, and theſe we ſhall moſt frequently meet with in perſons who have uſed ſpirituous liquors too freely. Here it is neceſſary to alter and improve the habit, by a free uſe of the bark, with the *decoct. ſarſaparil.* and a milk diet. Mr. *Pickering* had a caſe of this kind under his care; all the common means were tried, but without effect, till the patient's general health was improved by the above treatment. To the already mentioned obſtructions to a cure in fractures, we may add pregnancy; of which, I hope, it will be allowed, I have given a very clear caſe, which was not written with an intent to eſtabliſh the doctrine delivered

by

by ſome *, that a fracture will not unite during pregnancy. Every man who has had an opportunity of ſeeing much buſineſs knows the reverſe; but, on the other hand, we ought all to know, that it is impoſſible to cure ſome fractures during pregnancy, that we may not loſe our reputation, and diſgrace the profeſſion by delivering a contrary prognoſis. In *Hildanus* three inſtances are found of fractures, which happened to women when pregnant. The firſt is a compound fracture, therefore proves nothing; no more does the ſecond, which is a fractured *patella*; for we all know, that in this fracture, under the moſt favourable circumſtances, we are very often not able to procure a union by a continuity of boney *callus*. The third is an oblique fracture of the *tibia*, and appears to be a very clear caſe.

* Heiſter's Surgery, p. 120. B. II.

EXPLANATION of the FIGURES, which are all of the natural Size, except II. III. IV. and V. of the laſt Plate.

## PLATE I.

*Two figures which illuſtrate the caſe of the fatal* ileus, *by Dr.* Garthſhore, *Art.* XVII. *page* 223.

### FIG. I.

*A* The *colon.*

*B* The *cæcum.*

*C C C* The *appendix cæci vermiformis*, brought forwards from behind the *cæcum*, where it is naturally ſituated.

*D* The *ileon* immediately above the ſtrangulation.

*E* The *ileon* juſt before it terminates in the ſide of the *cæcum*, drawn into a globular form, by a ſtrangulating ligamentous cord.

*F* A probe, the point of which is covered by a firm fleſhy ſubſtance, which appeared to have been a part of the *omentum*, adhering ſtrongly to the meſentery of the *ileon* near the ſtrangulated part.

*G* A probe paſſing under another portion of the ſame ſubſtance, and covered at its point by the little meſentery of the *appendix cæci vermiformis*.

FIG. II.

*A B C C C* The *colon*, *cæcum*, and *appendix*, (as in fig. I.) in outlines.

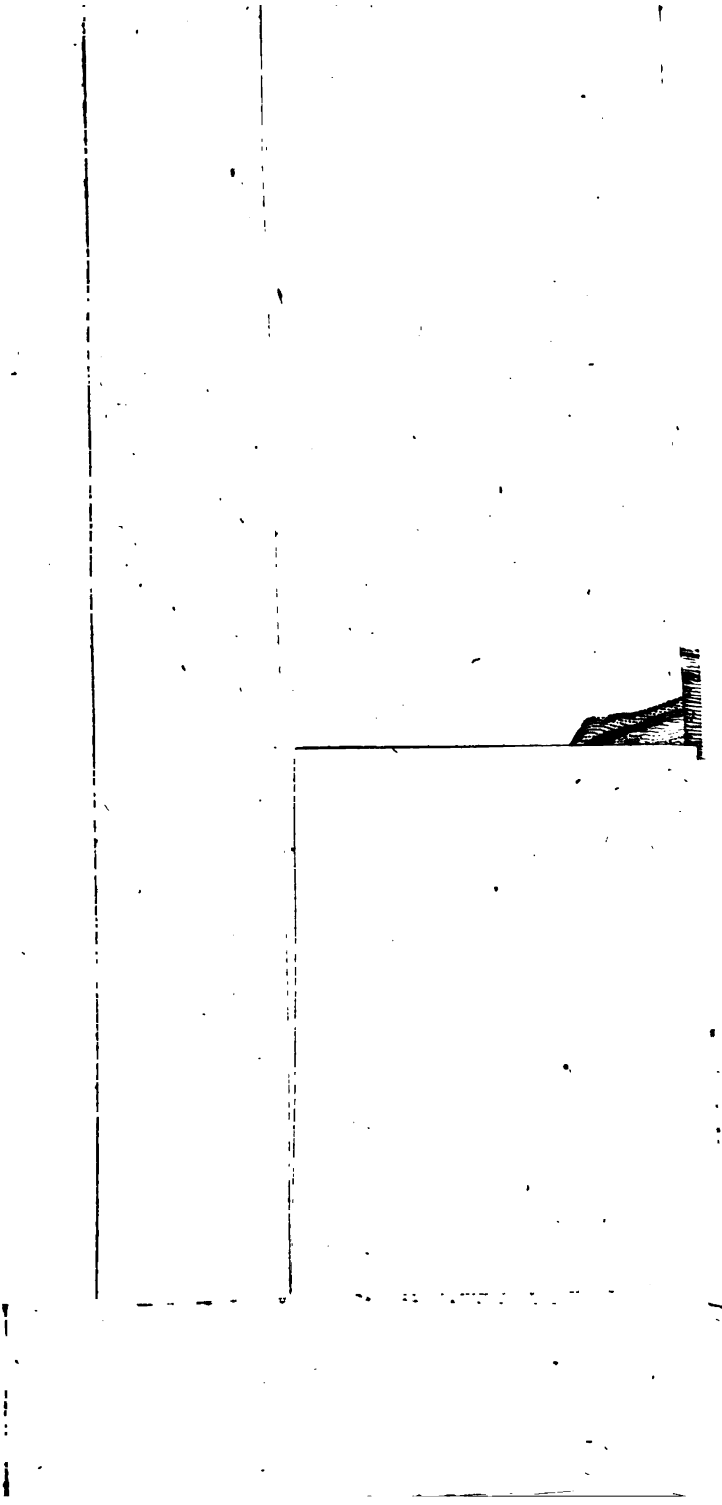
*D* The *ileon* immediately above the ſtrangulated part.

*E* The ſtrangulated part of the gut, diſengaged by having been cautiouſly drawn out of the nooſe.

*F* The part of the gut which was found cut through by the ſtrangulating cord.

*G* The cord itſelf, at one end fixed to the meſentery, and at the other to the ſide of the *ileon*. A probe is paſſed through it, to convey a clearer idea of the nooſe.

PLATE



Pl:II.

PLATE

D

## PLATE II.

*A fore-view of the narrow* pelvis, *relating to the caſe of the* Ceſarean Section, *by Dr.* Cooper, *Art.* XXI. *page* 261, *and by Mr.* Thomſon, *Art.* XXII. *page* 272.

*A* The four lower *vertebræ* of the loins, connected by their natural ligaments.

*B B* The right and left *os ilium.*

*C* The *ſymphyſis* of the *oſſa pubis.*

*D D* The right and left tuberoſity of the *iſchium.*

*E E* The right and left *foramen magnum iſchii.*

*F F* The right and left ſpine, or acute proceſs of the *iſchium.*

*G* The diſtance between the projecting uppermoſt part of the *os ſacrum,* and the inſide of the *ſymphyſis* of the *oſſa pubis.*

## PLATE III.

*A view of the underſide of the ſame narrow* pelvis, *ſeen as in a recumbent poſture.*

*A* The inſide of the uppermoſt part, or firſt bone of the *os ſacrum.*

*B* The outſide of the lowermoſt bone, or point of the *os coccygis.*

*C* The proceſſes of the higher *vertebræ lumborum*, ſeen in perſpective.

*D D* The outſide of the right and left *os iliúm.*

*E* The *ſymphyſis* of the *oſſa pubis.*

*F F* The right and left tuberoſity of the *iſchium.*

*G G* The right and left ſpine of the *iſchium.*

*H H* The right and left *foramen magnum iſchii.*

*I* The diſtance between the projection of the uppermoſt part of the *os ſacrum*, and the inſide of the *ſymphyſis* of the *oſſa pubis.*

## PLATE IV. FIG. I.

*A ſide-view of the ſame* pelvis, *to give a clear idea of the extraordinary projection of the* ſpine *over the cavity of the* pelvis.

*A B C D* The four lower *vertebræ lumborum.*

*E.* The right *os iliúm.*

*F* The tuberoſity of the right *iſchium.*

*G* The outſide of the lower end of the *ſacrum.*

*H* The *os coccygis.*

*I* The *ſpine*, or acute proceſs of the *iſchium.*

*K* The iſchiatic notch.

*L* The *acetabulum.*

*M* The right *foramen magnum.*

*N* The left *foramen magnum*, ſeen from the inſide of the *pelvis.*

*O* The upper part of the right *os pubis.*

*P* The upper part of the left *os pubis.*

*Q* The anterior-inferior ſpinal proceſs of the right *os ilium.*

*R* The ſame proceſs of the left ſide.

*S* The anterior-ſuperior ſpinal proceſs of the right *os ilium*: that of the left ſide is hid by the projection of the lumbar *vertebræ.*

FIG. II. III. IV. and V. explain the operation and machines recommended by Mr. *White*, in Art. XIII. page 168.

FIG. II. and III. repreſent, in two different points of view, a leg on which amputation had been performed, with a flap, a little above the ankle-joint.

## FIG. IV.

*A* An hollow artificial leg made of tin, and covered with thin leather.

*B C* Longitudinal ſteel bars, to be made of tough ſtuff, and as light as poſſible, with ſufficient ſtrength.

*D* A moveable joint, to be placed exactly oppoſite to the knee-joint.

*E* A ſteel bow, made thin and elaſtic, to paſs above two-thirds round the lower part of the thigh, and fixed with ſtraps of leather to buckle on the fore-part.—There is likewiſe another leather ſtrap below the knee, which buckles on the outſide.

FIG. V. repreſents an artificial leg made in the ſame manner, with the addition of a foot, made of light wood, and moveable joints, ſo as to imitate pretty nearly the natural motions of the joints of the ankle and of the toes.

IV.

# INDEX.

## A.

ALLANSON (Mr.) his Account of a ſimple Fracture of the *Tibia* in a pregnant Woman, where the *Callus* was not formed till after Delivery, - Page 410, *&c.*
—— the Want of Union not owing to Conſtitution, but to the State of Pregnancy, 411
—— nine Weeks after Delivery, ſhe was able to walk about the Room, and ſoon after had a ſound Limb, —— — 412
Amputation, a new Method of amputating a Leg, by Mr. White, —— 168, *&c.*
—— an Improvement of this Operation, publiſhed by Mr. O'Halloran, — 172
—— he had the Merit of bringing the Flap-operation to Perfection, — *ibid.*
—— Amputation of a cancered *Penis*, 135
*Aneuriſma varicoſum*, Caſe of one, in two Letters to Dr. Hunter, —— 377, *&c.*
—— another Caſe of the ſame Kind, by Mr. Armiger, with a Poſtſcript by Dr. Hunter, — — — 382, *&c.*
Anodynes, it depends on the Judgment of the Preſcriber to know when, and to what Extent they are to be uſed, — — 298
—— not ſafe at the Beginning of a Cough, except it is altogether of the ſpaſmodic Kind. *ib.*
—— great Miſchiefs have proceeded from them in the Hands of Ignorance, — 299

# INDEX.

Antimonials, the Uſe of them in the early Stages of moſt acute Diſtempers, an Improvement in the modern Practice of Phyſic, Page 29

——— given in the bilious Fever at Sea, 161, 163

*Aponeuroſis* of the *Biceps Muſcle*, the good Effects of dividing it in a painful lacerated Wound, — — 338, *&c.*

——— there was no Matter under the *Faſcia*, nor was the Diviſion of it attended with much Pain, — — — 347

ARMIGER, his Letter on the *Varicoſe Aneuryſm*, 283

B.

BADENOCH (Dr.) his Obſervations on the bilious Fever, uſual in Voyages to the Eaſt-Indies, 156

——— Remarks on the Cure, 161, *&c.*

BALFOUR (Mr.) his Caſe of a diſeaſed Leg, 1

Balſamics, the Term includes a vaſt Variety of Subſtances, — — 332

——— what are literally ſo, — *ibid.*

——— View of the principal Articles of this Kind in the *Materia Medica*, 233, *&c.*

——— have been uſed as phthiſical Remedies in all Degrees of the Diſtemper, 236, *&c.*

Balſamics, an Inquiry into the Propriety of this Practice, — — 237, *&c.*

——— ſhould be adjuſted to the Age and Habit of the Patient, — 238

——— early Prepoſſeſſions in favour of Balſams cannot ſoon be eradicated, 245

——— the ancient Practice of Embalming may, perhaps, have contributed to eſtabliſh a Prepoſſeſſion in their favour, 246

Balſamics, their uſeful Efficacy in pulmonary Diſeaſes much to be ſuſpected, Page 289
Battiscomb (Mr.) his ſpeedy Method of curing ulcers in the Legs by tight Bandages, 349, &c.
Bills of Mortality in London, the weekly ones defective in many Reſpects, — 215
—— many Advantages would ariſe from a more exact Plan, — — 216
—— ſuch a Plan was projected, not only for the Pariſhes within the Bills of Mortality, but all the Pariſhes in England, *ibid.* A Bill was brought into Parliament for this Purpoſe, but miſcarried, — 218
—— our Climate ſuffers much in the Eſteem of Foreigners by the Neglect in compoſing the preſent Bills of Mortality, - 220
—— many die of Conſumptions; but by no Means in the Proportion alleged by theſe erroneous Accounts, — 221
Bleeding ſeldom omitted very early in the common Meaſles, — — 148
——— generally neceſſary in the Beginning of a bilious Fever at Sea, — 161
——— not adviſable in the Fevers which are moſt frequent in the Ports of the Eaſt-Indies, 162
——— found to be dangerous in an epidemic Fever at Barbadoes, — 308
——— in the putrid Meaſles, as well as in all other putrid Diſeaſes, Practitioners ought to be cautious of blood-letting, — 147
Bliſters to the Head, like many other efficacious Remedies, often applied too late, 114
——— the Phyſician is afraid, leſt the Terror excited by the Preſcription, ſhould do as much Harm as the Bliſter could do Good, *ibid.*

# INDEX.

Bliſters, of Service in the ſecond Stage of the putrid Meaſles, — Page 149
——— no manifeſt Advantage from them in bilious Fevers, — — 164, &c.
Brocklesby (Dr.) his Experiments relative to the Analyſis and Virtues of Seltzer-Water, 7, &c.
——— his Account of an inciſted Tumor in the Orbit of the Eye, cured by Meſſrs. Bromfield and Ingram, — 371, &c.
*Bubonocele*, a fatal one, attended with uncommon Circumſtances, in a Boy, 178, &c.
——— an unſucceſsful Attempt was made to reduce it, — — 179
——— the Operation for this Diſtemper was propoſed but not conſented to, and the Patient died, — — 180
——— the Hiſtory of this Caſe indicates the Propriety of the Operation for ſtrangulated *Herniæ*, — — — 182
——— in all Probability it would have ſaved the Boy, — — *ibid.*

C.

*Ceſarean* Section, an extraordinary Caſe, where this Operation was performed on a living Subject, — — 261, 272
——— the Patient moſt ſenſible of Pain when the Needles were paſſing through the *Peritonæum*, — — 265
——— Succeſs to both Mother and Child has been repeatedly the Conſequence of this Operation, — — 270
——— the Public much indebted to Monſ. Simon for his Inquiries relating to this Operation, — — 279
——— the Accounts given of this Operation vague and indefinite, ——— 281

*Ceſarean*

*Cesarean* Section, Time and Experience must determine whether the Operation be eligible or not, ——— Page 287
——— much has been said for and against this Operation, ——— 286
——— Rousset was a great Advocate for it, and relates many Instances of its Success, *ibid.*
——— Marchant disputes their Authenticity, and condemns the Operation, *ibid.*
——— a fair Account of the Failures and Success of this Operation, might render it an easy Matter to determine whether it is eligible or not, — — 286
Calcareous Matter coughed up from the Lungs abundantly, with the Patient's Recovery, by Dr. Brocklesby, — — 26
Calomel prescribed for the Sciatica, 71
—— the Dose increased to six Grains a Day, 72
—— sometimes given in this Manner with the Turpentine in Worm-cases, — 73
—— Process of, in the Sciatica, 74
——if the Pain does not abate, the Dose of Calomel may be increased two Grains one Night, one the next; and thus alternately, 75
—— a genuine Sciatica commonly yields to such a Process in the Space of a few Weeks, *ibid.*
Cancer, Case of one on the *Penis*, 183
——— of one on the Breast, with the Effects of the *Cicuta* and the Carrot Poultice, 358
Carrot Poultice, very efficacious in cancered Ulcers, — — — 184
——— first recommended by Mr. Soultzer, 183
——— proved an excellent Application for a phagædenic Ulcer on the Foot, 186
——— effectually subdues the intolerable Stench attending cancerous Ulcers, 189
——— abates also the Pain, — 190

Carrot

Carrot Poultice, an obſtinate Caſe, where, as a Topic, it proved very efficacious, Page 191
——— Poultice, the Carrots being in Perfection, contributes greatly to haſten a Cure, 189
——— this Poultice, upon the firſt Application in a cancered Breaſt, removed all the *Fætor*, — — — 362
——— when uſed together with a Poultice of the Tops of the *Cicuta*, the Carrots change the Smell of the *Cicuta*, as well as correct that of the Sore, — 363
Catheter, the Uſe of this Inſtrument rarely neceſſary in Labour, — — 67
——— great Danger, however, in not attending to the Symptoms which indicate the Neceſſity of uſing it, — — 68
*Cerumen* or Ear-wax, the common Cauſe of curable Deafneſs, — 199, 200
——— a Method of diſſolving it becomes an Inquiry of Importance, — 200
——— Experiments on the diſſolving it, 201
——— Water found to be the moſt powerful Solvent, — — 204
——— the warmer it is applied, as far as the Ear can bear it without Injury, the more effectual the Remedy, — 205
——— if larger Syringes were uſed, more forcibly applied, and longer perſevered in, the Succeſs of the Operation would be more evident, — — — *ibid.*
*Cicuta*, Decoctions from it uſed with Succeſs, to diſcuſs a Swelling above the Spine of the *Ilium*, — — — 104
——— its Extract uſed internally to a Man with a cancered *Penis*, — — 183
——— the Decoction of it uſed as a Fomentation to a Cancer in the Breaſt, — 360

*Cicuta*, the Patient brought at length to take two hundred and ten Grains of the Powder in a Day, — — Page 361
——— this Medicine generally relieved the excruciating Pains, — — *ibid.*
——— the ſhooting Pains, which often returned with great Violence, were generally abated by an increaſed Doſe of the *Cicuta*, 362
——— a ſtrong Decoction thereof injected to clean the Sore, — — 363
——— the external Uſe of the *Cicuta* is alſo of Service to ſome indolent Tumors on the Side of the Neck, — — 366
Conſumption, few recover from one, 206
——— ſome, however, talk of their Cures of it with the utmoſt Confidence, *ibid.*
——— riding on Horſeback in conſumptive Caſes, commonly hurtful, if certain regulations are not obſerved, — 212
——— the general Cauſe of this Diſtemper, 241
——— Remarks on the general Uſe of Balſams in this Diſeaſe, — 231, *&c.*
——— the Time when a Phyſician can be of moſt Uſe in the Cure of Conſumptions is at their firſt Beginning, 291, 293
——— the Beginning of moſt Conſumptions is a Cough, — — 292
——— every Thing of a heating irritating Nature ſhould be avoided, — 297
——— a ſtriking Deſcription of a Perſon in an incurable Conſumption, — 295
Cooper (Dr.) his Caſe of the *Ceſarean* Section, 261
*Cortex Peruvianus* adminiſtered with Succeſs during the Intermiſſion of a bilious Fever, 161

*Cortex Peruvianus*, the only Medicine to be depended upon when this Fever has the Symptoms of impending Danger, Page 165, 166
——— found to be an efficacious Remedy in a putrid remitting Fever, — 316
——— given at any Time of the Diſeaſe indiſcriminately, — — *ibid.*

D.

Dickson (Dr.) his Obſervations on the Cure of an *Hæmoptoë*, —— 206
——— upon riding on Horſeback for the Cure of a Conſumption, 212
———his Defence of Sydenham's Method of treating the Meaſles, againſt Mead, - 247
——— Blood-letting not neceſſary in the epidemic Meaſles in 1670, — 249
——— Sydenham, therefore, not to be cenſured becauſe he did not order Bleeding, 250
——— Defence of Sydenham's Hiſtory of the Meaſles, againſt Morton, — 256
Diſſection of the *Abdomen* of a Woman, who died of a Rupture of the Bladder, 64
——— of a Woman who died after the *Ceſarean* Operation, — 266, 277
——— of a Man who died of an Effuſion of Blood into the Cavity of the *Pericardium*, 334
——— of one who died of a *Hernia*, 356
Dropſy, a Letter on the Cure of it, by Dr. John Fothergill, — — 114
——— few dropſical Patients can hear the Name of Tapping without Apprehenſions of Terror, — — 115
——— this Operation, when neceſſary, ſhould be ſubmitted to as early as poſſible, 117
——— Dropſy of the Brain, the *Hydrocephalus Internus* called ſo by Dr. Whytt, 82

E.

Ear-wax often the Cauſe of Deafneſs, by obſtructing the *meatus auditorius externus*, P. 199
——— beſt diſſolved by ſyringing with warm Water, ——— — 205
Else (Mr.) his Account of a ſucceſsful Method of treating ſore Legs, — 347
——— his ſucceſsful Method of treating ſore Legs conſiſts chiefly in the Application of a tight Bandage, — 350
——— his Caſe of a fatal and uncommon *Hernia*, — — 355
Emetics of great Service in a putrid remitting Fever, — — 311—314
Evacuations in general, not of Uſe in a late epidemical Diſtemper at Barbadoes, unleſs under peculiar Circumſtances and Reſtrictions, 308, *&c.*
Experiments to aſcertain the Nature and medicinal Virtues of Seltzer Water, 12, *&c.*
——— to diſcover the beſt Method of diſſolving the *Cerumen* or Ear-wax, 201, *&c.*
Eye, an inciſted Tumor in the Orbit of, cured by Meſſrs. Bromfield and Ingram, 371, *&c.*

F.

Farr (Dr.) his Caſe of the Locked Jaw and *Opiſthotonos*, — — 91, *&c.*
——— ſome Remarks of his on the Uſe of the *Cicuta*, — — 104, *&c.*
——— glandular Swellings diſperſed in a Fortnight, by taking no more than ten Grains a Day of the Extract, — 108
*Fæces* indurated, a Letter on painful Conſtipation proceeding from this Complaint, 123
——— Caſe of an elderly Gentleman labouring under

under this Diſorder, miſtaken for an obſtinate *Diarrhœa*, — Page 124, &c.
*Fæces* indurated, another Caſe not altogether diſſimilar, — — 126
—— Uſe of the Bark often produces troubleſome Accidents of this Kind, — 129
Fever, miliary Eruptions attending one, ſeldom deſerve to be reckoned critical, — 30
—— Account of a bilious Fever in the Ponſborne Eaſt-Indiaman, anchored to the leeward of the Iſland of Mohila, — 157
—— in the Nottingham Eaſt-Indiaman off the Iſland of Joanna, — 158
—— the Night Air hath a powerful Influence in occaſioning theſe Fevers, — 159
—— Remarks on the Cure of the bilious Fever, — — 160
—— the Sick in this Diſeaſe, eſpecially in warm Climates, to be ſupplied with Plenty of cool antiſeptic Liquors, — 165
—— Deſcription of a putrid remitting one at Barbadoes, — — 305
—— a Stupor and Delirium the chief Diagnoſtics, — — 306
—— a profuſe Sweat generally brought on a Remiſſion of the Symptoms, — 307
—— Bleeding, or any other Evacuation, generally hurtful in the Diſtemper, 308, &c.
—— Nature ſeemed to point out an Emetic in ſome Part of the Diſeaſe, — 314
—— the Bark proved a moſt efficacious Remedy, — — 316
—— the Phyſician ſometimes obliged to uſe Bliſters in this Fever, but it was always with Reluctance, — — 317
Flap Operation, originally an invention of Mr. Lowdham, — — 172

Flap Operation, the Merit of bringing it to Perfection belongs to Mr. O'Halloran, Page 173
—— this Operation performed, with great Succeſs, by Mr. Charles White, — 175
FOTHERGILL (Dr. John) his Remarks on the *Hydrocephalus Internus*, — 40
—— his Cure of the Sciatica, 69
—— his Obſervations on the Uſe of Tapping early in Dropſies, — 114
—— his Remarks on the Uſe of Balſams in the Cure of Conſumptions, 231, *&c.*
—— Effects they are likely to have on the human Body, — 232, 337, *&c.*
—— his Opinion againſt uſing Balſams in all Degrees, and all Conditions of a Conſumption, — 237, *&c.*
—— that they have a Tendency rather to increaſe than mitigate the Symptoms attending a *Phthiſis Pulmonalis*, — 289, *&c.*
Fractures cannot be certainly cured in the moſt favourable Subjects, — 412
—— all Endeavours may be fruſtrated by the Interpoſition of the ſoft circumjacent Parts, — — *ibid.*
—— the Cure may fail from Conſtitution, eſpecially in Perſons who have uſed ſpirituous Liquors too freely, — 413
—— in ſuch Circumſtances, Means muſt be uſed to alter and improve the Habit, *ibid.*
—— it is impoſſible to cure ſome Fractures in Pregnancy, — 424

G.

GARTHSHORE (Dr.) his Caſe of a fatal *Ileus*, 223
—— two Plates to illuſtrate the Caſe, 226
—— in deſperate Caſes of the *Ileus*, ancient Authors

Authors have recommended making an Opening into the Cavity of the *Abdomen*, 227, *&c.*
*Gaſtrotomy*, a painful and hazardous Operation in the Iliac Paſſion, — 228
——— not to be warranted unleſs the Symptoms are ſuch as enable us to diſtinguiſh the Cauſe of the Diſeaſe, — *ibid.*
GIBSON (Mr.) his Account of a *Bubonocele*, attended with uncommon Circumſtances, 178
——— his Obſervations on the Malt Infuſion and the Carrot Poultice, 182, *&c.* 186, *&c.*
Godfrey's Cordial, great Miſchiefs have proceeded from it, — 299

H.

*Hæmmorrhages*, ſo frequently ſpoken of by Heiſter, not to be ſo much dreaded as he intimates after the *Ceſarean* Operation, 283
HAYGARTH (Dr.) his Experiments on the *Cerumen* or Ear-wax, which is often the Cauſe of Deafneſs, — — 198
Hectic Complaints cured by Seltzer Water, 33
*Hemiplegia*, an Account of one attended with uncommon Circumſtances, 110, *&c.*
*Hernia*, Caſe of a fatal and uncommon one, 355
——— a Strangulation may happen, and the whole Circumference of the Gut not be incloſed in the Stricture, — 357
HEVIN (Monſ.) a Paſſage from a Work of his, 229
HEY (Mr.) his Account of a Rupture in a pregnant Woman, — 58
HUNTER (Dr.) his Introduction to Mr. Teckel's Account of the Inſenſibility of Tendons, 343
——— his Poſtſcript to a Caſe of a *Varicoſe Aneuryſm*, — 385

HUNTER (Dr.) remarks, that there are now in the Medical Collection, five *unqueſtionable* Inſtances of a Diſeaſe, before not ſo much as imagined to exiſt, — Page 287

——— his Appendix to a Caſe on the *Inverſio*, or *Retroverſio Uteri*, — 400

*Hydrocephalus Internus*, it is extremely difficult to ſuggeſt any probable Means of curing this Diſeaſe, — — 40

——— more done by Dr. Robert Whytt, in his Hiſtory of this Diſtemper, to elucidate the Subject, than by any other Writer, 41, 44

——— it bears the greateſt Reſemblance to Diſeaſes ſuppoſed to proceed from Worms, *ibid.* *&c.* 79

——— the Cauſe of, as found by Diſſections, — — 42

——— the Symptoms, — 45, *&c.*

——— it is difficult to point out ſuch as are peculiar to the Diſtemper, 48, *&c.*

——— happens commonly to healthy active Children, — — 51

——— the giving Way of ſome Veſſel of ſlight Texture, may perhaps be the Occaſion, — — *ibid.*

——— Manner of proceeding in the earlier Stages of the Diſtemper, 52, *&c.*

——— Patients go off in the ſame Manner as thoſe who die of a Depreſſion of the Scull, — — 55

——— Caſe of a Woman aged thirty who died of it, by Dr. Huck, *ibid.*

——— Caſe of a Girl who, by a Fall had ſtruck her Head againſt the Floor, 79, 83

——— called, by Dr. Whytt, *the Dropſy of the Brain*, — — 82

*Hydrocephalus Internus*, a conſiderable Degree of Feveriſh Heat in the firſt Stage, Page 82
——— Caſe of another Girl labouring under the ſame Diſtemper, who died convulſed, — — 83
——— a Caſe ſimilar to the laſt, 84
——— of a Boy who recovered, 321, *&c.*

I.

JAMES (Dr.) his Powders preferable, in bilious Fevers, to other Preparations of Antimony, 164
Jaw, Locked, large Doſes of *Opium* neceſſary in this Diſeaſe, ——— 93
Iliac Paſſion, the Cauſes various which give riſe to it, — — 223
—— Caſe of a fatal one, — 224
—— the *Jejunum* and *Ileon* were greatly diſtended with Air, — 225
Inteſtines, their periſtaltic Motion inverted by Inflammation in a ſevere Iliac Paſſion, 227

L.

*Lamellæ*, a few bony, interſperſed in a diſeaſed Leg, without the Appearance of Bones, 6
Leg, Caſe of a diſeaſed one, by Mr Balfour, 1
—— Amputation of one a little above the Ancle Joint, — — 168
*Lixivium ſaporinum*, works no Change when mixed with pure Water, — 11
——— has a ſurprizing effect when mixed with Seltzer Water, ——— *ibid.*
Locked Jaw, Caſe of a remarkable one by Mr. Farr, ——— — 89
——— *Opium* often not given in ſuch large Doſes as neceſſary in this Diſtemper, 91, *&c.*
——— Caſe of a Man to whom it was given with Succeſs, to the Amount of five Drachms in the Space of three Weeks, 102, *&c.*

LOWDHAM (Mr.) the Inventor of the Flap Operation, — — Page 172
LYNN (Mr.) his Hiſtory of a fatal Inverſion of the *Uterus*, with an Appendix by Dr. Hunter, 388, *&c.*

M.

Madeira Wine, old proved a Medicine, of ſingular efficacy in a putrid remitting Fever, 317
Malt Infuſion recommended as a Medicine, by Dr. Macbride, — — 182
—— given as a conſtant Drink to a Woman with an ulcerated Foot, —— 188
—— its Efficacy with the Application of the Carrot Poultice in a very obſtinate Caſe, 191
—— a Woman infected with the Venereal Diſeaſe, perfectly cured by drinking plentifully of Wort, —— 368
—— proves a Cure for a Pain and Swelling in the right *Hypochondrium* in a Woman after Lying-inn, —— 369
MARCHANT (Monſ.) condemns the *Ceſarean* Operation, —— 286
MEAD (Dr.) *de Variolis et Morbillis*, Paſſages from thence, where he cenſures Sydenham's Treatment of the Meaſles, — 248, 253
—— an Error of his in regard to Sydenham, 251
Meaſles, Symptoms of thoſe about London within theſe few Years, very different from what have been handed down by the more early medical Writers, —— 132
—— an Obſervation of Sydenham with regard to them, — — 133
—— the putrid or malignant the moſt dangerous, — — *ibid.*
—— this ſpecies raged ſeverely at London in 1672, —— — 134

Meaſles, the Hiſtory of them in 1670, has been given by Dr. Sydenham, - Page 134
——— the epidemic ones at Plymouth in 1745, mentioned by Dr. Huxham, — 136, 143
——— the putrid Meaſles again viſited Plymouth and its Neighbourhood, in 1749, and 1750, — — 136
——— an Account of thoſe which raged in London in 1763 and 1768, - 136, &c.
——— in the malignant Meaſles the Appearances are very different, — 139
——— the medical Treatment of this Diſtemper, — — 145, &c.
——— in this, as well as other putrid Diſeaſes, we ſhould not be too liberal of Blood-letting, 147
——— the Opinion vulgarly received, of the Meaſles being an excellent Preparatory for the Small-pox, has no Foundation in Truth, 152
——— the being enfeebled by one Diſeaſe, renders the Body leſs capable of ſupporting a ſecond, — — *ibid.*
Mercurials pervade the inmoſt receſſes of the muſcular and tendinous Parts, — 75
Morton (Dr.) his Account of the mortality of the epidemical Meaſles in 1672, not to be credited, — — 257
Muſk uſed in caſes of the Locked Jaw, 97

N.

Nitre of great Uſe in the Cure of an *Hæmoptoë* or ſpitting of Blood, — 208, &c.
——— of ſingular Uſe in uterine *Hæmorrhages*, 210
Nicholson (Dr.) his Account of the Effects of the *Cicuta* and a Carrot Poultice upon a Cancer of the Breaſt, — 358

O.

O'Halloran (Mr.) Author of a New Method of Amputation, — Page 172
Oil, dropping it into the Ear before Syringing with watery Liquors, improper, — 204
*Opium* gives a temporary Relief in the Sciatica, 71
—— often of great Efficacy when given in large Doſes, — — 91, 93, &c.

P.

*Penis*, a cancered one, —— 183
*Phthiſis pulmonalis*, all Medicines of heating ſtimulating Qualities improper in the Treatment of it, — — 241
Pregnancy an obſtruction to a Cure in Fractures, 413
Probability, our imperfect Knowlege of Nature, ſeldom allows us to advance beyond it, 10

R.

Remedies, ſeveral efficacious ones often made uſe of too late, — — 114
*Retina* of the Eye, much affected by the *Hydrocephalus Internus*, — 329
Rousset, (Monſ.) a great Advocate for the *Ceſarean* Operation, — — 286
Rupture, Caſe of one in the Bladder from a Suppreſſion of Urine in a pregnant Woman, 60
—— Urine diſcovered in the *Abdomen* after the Patient's Death, — 64, &c.
—— the Extravaſation proceeded from an Aperture in the ſuperior Part of the Bladder, 65
—— Method of Prevention, the grand Affair with reſpect to this Diſeaſe, - 68
—— another Caſe of one in the Bladder with an *inverſio uteri* in Pregnancy, — 388

RUSH (Dr.) his Account of the Uſefulneſs of Wort in ſome ill-conditioned Ulcers, P. 367

S.

SANDIFORD (Dr.) his Account of a late epidemical Diſtemper at Barbadoes, 304, *&c.*

Scarification, a Method of, recommended in anaſarcous Swellings of the Legs and Thighs, 120, *&c.*

Sciatica or *morbus iſchiadicus*, Caſe of a Man afflicted with this Complaint, — 69

——— a Proceſs of Calomel, *&c.* in this Diſeaſe, — — — 74

——— ſeldom any genuine Sciatica but has yielded to this Proceſs, — 75

Seltzer Water, recommended by Hoffman and other German Writers, — 7

——— of great Efficacy in the Cure of acute and chronical Diſeaſes, — *ibid.*

——— what is imported at London brought from the Electorate of Triers, — 8

——— a ſmart and pungent Taſte characteriſes its Excellence, — — 9

——— the Analyſis thereof by ſeveral Experiments, — — 10, *&c.*

——— its good Effects in a hectic emaciated State, — — 25, *&c.*

——— in a Fever attended with Sweats and Eruptions, — — 29, *&c.*

——— of Utility to nauſeating and languid Patients, — — 34, *&c.*

SIMON (Monſ.) the Public much indebted to him for his Inquiries relative to the *Ceſarean* Section, — — 279

*Spaſmus cynicus* diſtorts the Face to a moſt amazing Degree, — — 91, *&c.*

Squire's Elixir often of great Prejudice, 299

Stran-

Strangulation, how formed in the Iliac-Paſſion, Page 229
SYDENHAM (Dr.) defended againſt the Cenſures of Dr. Mead, — — 247, &c.
——— of Morton, — 256, &c.
——— Extracts from his Works, 248, &c.

T.

Tapping, when neceſſary, ſhould be done as early as poſſible, — — 116
——— two Caſes, wherein is ſhewn the Succeſs of this Operation when performed early, 116, &c.
TECKEL (Mr.) his Obſervation on the Inſenſibility of Tendons, — 343
——— an Opinion has prevailed through many Ages, that they are endued with exquiſite Senſibility, — — *ibid.*
——— their Inſenſibility proved by an Experiment, — — 345
Theory of the Effects of fixed Air acting on Bodies, owing to the philoſophical Labours of Dr. Black and Dr. Macbride, — 23
THOMSON (Dr.) his Account of a fatal Effuſion of Blood into the Cavity of the *Pericardium*, 330
THOMSON (Mr.) his Account of his Performance of the *Ceſarean* Section, — 272

U.

*Uterus*, Caſe of an inverted or retroverted one, by Mr. Lynn, — — 388, &c.
——— a Caſe alluded to in the preceding, by Dr. Hunter, — — 401
WATSON (Dr.) his Obſervations on the *Hydrocephalus Internus*, — — 78
——— his Account of the putrid Meaſles at London in the Years 1763 and 1768, 132